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(54) **Antiviral compositions comprising geraniol and carvone**

(57) The present invention concerns an antiviral composition comprising at least the following components: 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol, the composi-

tion for use as a medicament and the composition for use in treatment of diseases.

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DescriptionField of the invention:

[0001] The present invention relates to the pharmaceutical field.

The present invention relates to a composition according to claim 1, a composition for use as a medicament according to claim 8, a composition for use in treatment and prevention of diseases caused by DNA enveloped, DNA non-enveloped, RNA enveloped, RNA non-enveloped viruses according to claim 10, use of the composition as a prophylactic according to claim 13, use of the composition as a disinfectant according to claim 14, use of the composition as a viral inhibitor according to claim 15, a method for manufacturing the composition according to claim 17.

Background of invention:

[0002] WO 2009148280 relates to use of a diaryl heptonoid-based compound for inhibiting virus activity. The diaryl heptonoid-based compound has excellent inhibitory effects on virus activity, so it can be used as a therapeutic agent for virus-related diseases.

WO 2009148279 relates to an application for a triterpenoid-based compound for suppressing viral activity. The triterpenoid-based compound is outstandingly effective in suppressing viral activity and can therefore be beneficially used as a therapeutic agent for medical conditions in which a virus is involved.

[0003] An extensive literature search did not find any evidence of a significant amount of 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol together, or both in combination with other components to produce a broad spectrum antiviral effect.

Summary of the invention:

[0004] The composition of the present invention is defined in claim 1, the composition for use as a medicament of the present invention is defined in claim 8, the composition for use in treatment and prevention of diseases caused by DNA enveloped, DNA non-enveloped, RNA enveloped, RNA non-enveloped viruses of the present invention is defined in claim 10, the use of the composition as a prophylactic of the present invention is defined in claim 13, the use of the composition as a disinfectant of the present invention is defined in claim 14, the use of the composition as a viral inhibitor of the present invention is defined in claim 15, the method for manufacturing the composition of the present invention is defined in claim 17.

[0005] The technical effect of the present invention is to prevent viruses merging with the host cell(s) by interfering with the viral lipid envelope.

The technical problem to be solved is to prevent the multiplication of the viruses in animals and human beings and therefore curing diseased animals or human beings.

To solve the problem, the present invention provides a composition according to claims 1, 8 and 10 and their dependent claims.

[0006] It is inferred from some scientific studies that non-enveloped viruses acquire a lipid envelope from the host and as the composition of the present invention interferes with this triglyceride envelope and the envelope of enveloped viruses, it can be declared that the composition of the present invention will de-activate all types of viruses in vivo within animals or human beings.

[0007] Following are the most common viruses that can be de-activated with the compositions according to the present invention.

As the mode of action of the invention is non-specific, the virus species and serotype is irrelevant.

The person skilled in the art knows that all viruses are classified into 4 major groups consisting of DNA enveloped viruses, DNA non-enveloped viruses, RNA enveloped viruses and RNA non-enveloped viruses.

[0008] All compositions of the present invention are pharmaceutical compositions in a pharmaceutically effective weight percentage which can treat animal and/or human diseases.

List of diseases:

[0009] The compositions of the present invention are used for treating and preventing a disease related to one of the above mentioned viral groups as well as on diseases selected from the non exhaustive group consisting in: (broncho)-pneumonia, 3 day fever exanthema, acute and chronic hepatitis, acute fever, acute gastroenteritis caused by strains such as Desert Shield Lordsdale Mexico Norwalk Hawaii Snow Mountain Southampton virus, acute gastroenteritis caused by strains such as Houston/86 Houston/90 London 29845 Manchester Parkville Sapporo virus, acute hepatitis, acute respiratory distress syndrome, AIDS, anogenital mucosa, Argentine hemorrhagic fever, arthralgia, avian flu, Bo-

livian hemorrhagic fever, Brazilian hemorrhagic fever, chickenpox, chronic hepatitis, coma, common cold infection, common cold symptoms, congenital infection, conjunctivitis, contagious ecthyma, contagious pustular dermatitis, cornea, Creutzfeldt-Jakob-Disease, cryptic enteric infection, cytomegaloviral mononucleosis, dengue hemorrhagic fever (DHF), dengue shock syndrome (DSS), diarrhea, eczema, eczema herpeticum, encephalitis, encephalopathy, enteritis, epidemic nephropathy, epidemic polyarthritis and exanthema, epidermodysplasia veruciformis, Epstein-Barr virus infection, exanthema, exanthema in children, Fatal familial insomnia, febrile encephalitis, febrile illness, fever, formerly Human echovirus 22 23, gastroenteritis, gastrointestinal infections intracytoplasmic inclusion bodies, genital tract infections, haemolytic crisis in people with sickle cell disease, headaches, hemorrhagic fever, hemorrhagic fever w renal syndrome, herpetic encephalitis, Hodgkin's disease, Human coxsackievirus, Human coxsackievirus B1-6, Human echovirus 1-7 9 11-21 24-27 29-33, Human enterovirus 69, Human enterovirus 71 (hand foot and mouth disease), Human hepatitis virus A (HHAV), Human poliovirus, Human rhinovirus 1 2 7 9 11 15 16 21 29 36 39 49 50 58 62 65 85 89 hyperacute respiratory disease, Human rhinovirus 3 14 72, hyperacute respiratory disease, immune deficiency syndrome, infantile diarrhea, Infection with any dengue serotype (1-4), infectious mononucleosis, joint pain, Kaposi's sarcoma, keratoconjunctivitis, Kuru, lesions of cutaneous sites, leucopenia, liver cirrhosis, lower respiratory tract infection, lymphadenopathy, maculopapular rash, malignant tissue, measles, meningitis, mononucleosis (kissing disease), mumps, muscle pains, myocarditis, nephropathy, nephropathy in transplant patients, numbness, old world, opportunistic infection, oral infections, oral mucosa, orchitis, pancreatitis, pandemics, papilloma, paralysis, persistent infection of the kidney, persistent infections, persistent lymphopathy, pharyngeal conjunctivitis, pneumonia, primary hepatocellular carcinoma, Prions, pulmonary syndrome, rabies, rash, recurrent epidemics of respiratory disease, respiratory disease, respiratory illness, Roseola infantum, sarcoma, scarring, severe chills arthralgia, severe acute respiratory syndrome, severe encephalitis, shingles, sixth disease, skin and mucous membrane lesions, slim disease, sore throat, subacute sclerosing panencephalitis, subitum, superinfection with Deltavirus, ulceration, upper respiratory tract illness, Venezuelan hemorrhagic fever, vesicular pharyngitis, vesicular stomatitis with exanthema, viral polyarthritis and rash, viral warts, watery diarrhea, weakness, zoonotic, zoster, metaplasia, dysplasia, anaplasia, desmoplasia, carcinoma in situ, flu (influenza), invasive carcinoma, as well as any disease directly or indirectly related to the above mentioned viruses.

Examples of viruses:

[0010] Information about the viruses can be found on internet at the following link: <http://www.ncbi.nlm.nih.gov/ICTVdb/Ictv/ICD-10.htm>

[0011] A non exhaustive list of viruses and their species which can be deactivated and therefore prevented from multiplication by the compositions of the present invention is as follows: Abadina virus (Reoviridae), Abelson murine leukemia virus (Retroviridae), Abras virus (Bunyaviridae), Absettarov virus (Flaviviridae), Abu Hammad virus (Bunyaviridae), Abu Mina virus (Bunyaviridae), Acado virus (Reoviridae), Acara virus (Bunyaviridae), Accipitrid herpesvirus (Herpesviridae), Acheta domestica densovirus (Parvoviridae), Acrobasis zelleri entomopoxvirus (Poxviridae), Adelaide River virus (Rhabdoviridae), Adeno-associated virus (Parvoviridae), Aedes aegypti densovirus (Parvoviridae), Aedes aegypti entomopoxvirus (Poxviridae), Aedes albopictus densovirus (Parvoviridae), Aedes pseudoscutellaris densovirus (Parvoviridae), African green monkey cytomegalovirus (Herpesviridae), African green monkey HHV-like virus (Herpesviridae), African green monkey polyomavirus (Papovaviridae), African horse sickness viruses (Reoviridae), African swine fever virus, African swine fever-like viruses, AG- virus (Bunyaviridae), AG- virus, (Bunyaviridae), Agaricus bisporus virus, Aguacate virus (Bunyaviridae), Ahlum water-borne virus (Tombusviridae), Aino virus (Bunyaviridae), Akabane virus (Bunyaviridae), AKR (endogenous) murine leukemia virus (Retroviridae), Alajuela virus (Bunyaviridae), Alcelaphine herpesvirus (Herpesviridae), Alenquer virus (Bunyaviridae), Aleutian disease virus (Parvoviridae), Aleutian mink disease virus (Parvoviridae), Alfuy virus (Flaviviridae), Allerton virus (Herpesviridae), Allitrich herpesvirus (Herpesviridae), Alomyces arbuscula virus, Almeirim virus (Reoviridae), Almpiwar virus (Rhabdoviridae), Altamira virus, (Reoviridae), Amapari virus (Arenaviridae), American ground squirrel herpesvirus, (Herpesviridae), Amsacta moorei entomopoxvirus (Poxviridae), Amyelosis chronic stunt virus (Caliciviridae), Ananindeua virus (Bunyaviridae), Anatid herpesvirus (Herpesviridae), Andasibe virus (Reoviridae), Anhangá virus (Bunyaviridae), Anhembi virus (Bunyaviridae), Anomala cuprea entomopoxvirus (Poxviridae), Anopheles A virus (Bunyaviridae), Anopheles virus (Bunyaviridae), Antequera virus (Bunyaviridae), Aotine herpesvirus (Herpesviridae), Apeu virus (Bunyaviridae), Aphodius tasmaniae entomopoxvirus (Poxviridae), Apoi virus (Flaviviridae), Aransas Bay virus (Bunyaviridae), Arbia virus (Bunyaviridae), Arboledas virus (Bunyaviridae), Arbroath virus (Reoviridae), Argentine turtle herpesvirus (Herpesviridae), Arkonam virus (Reoviridae), Aroa virus (Flaviviridae), Arphia conspersa entomopoxvirus (Poxviridae), Aruac virus (Rhabdoviridae), Arumowot virus (Bunyaviridae), Asinine herpesvirus (Herpesviridae), Atlantic cod ulcer syndrome virus (Rhabdoviridae), Atlantic salmon reovirus Australia (Reoviridae), Atlantic salmon reovirus Canada (Reoviridae), Atlantic salmon reovirus USA (Reoviridae), Atropa belladonna virus (Rhabdoviridae), Aucuba bacilliform virus, Badnavirus, Aujeszky's disease virus (Herpesviridae), Aura virus (Togaviridae), Auzduk disease virus (Poxviridae), Avalon virus (Bunyaviridae), Avian adeno-associated virus (Parvoviridae), Avian carcinoma, Mill Hill virus (Retroviridae), Avian encephalomyelitis virus (Picornaviridae), Avian

infectious bronchitis virus (Coronaviridae), Avian leukosis virus - RSA (Retroviridae), Avian myeloblastosis virus (Retroviridae), Avian myelocytomatosis virus (Retroviridae), Avian nephritis virus (Picornaviridae), Avian paramyxovirus (Paramyxoviridae), Avian reovirus (Reoviridae), B virus (Parvoviridae), B-lymphotropic papovavirus (Papovaviridae), Babahoya virus (Bunyaviridae), Babanki virus (Togaviridae), Baboon herpesvirus (Herpesviridae), Baboon polyomavirus (Papovaviridae), Bagaza virus (Flaviviridae), Bahia Grande virus (Rhabdoviridae), Bahig virus (Bunyaviridae), Bakau virus (Bunyaviridae), Baku virus (Reoviridae), Bald eagle herpesvirus (Herpesviridae), Bandia virus (Bunyaviridae), Bangoran virus (Rhabdoviridae), Bangui virus (Bunyaviridae), Banzi virus (Flaviviridae), Barmah Forest virus (Togaviridae), Barranqueras virus (Bunyaviridae), Barur virus (Rhabdoviridae), Batai virus (Bunyaviridae), Batarna virus (Bunyaviridae), Batken virus (Bunyaviridae), Bauline virus (Reoviridae), Beak and feather disease virus (Circoviridae), BeAn virus (Rhabdoviridae), BeAr virus (Bunyaviridae), Bebaru virus (Togaviridae), Belem virus (Bunyaviridae), Belmont virus ((Bunyaviridae)), Belterra virus (Bunyaviridae), Benevides virus (Bunyaviridae), Benfica virus (Bunyaviridae), Berne virus, (Coronaviridae), Berrimah virus (Rhabdoviridae), Bertioga virus (Bunyaviridae), Bhanja virus (Bunyaviridae), Bimbo virus (Rhabdoviridae), Bimiti virus (Bunyaviridae), Birao virus (Bunyaviridae), BivensArm virus (Rhabdoviridae), BK virus (Papovaviridae), Bluetongue viruses (Reoviridae), Bobaya virus (Bunyaviridae), Bobia virus (Bunyaviridae), Bobwhite quail herpesvirus (Herpesviridae), Boid herpesvirus (Herpesviridae), Bombyx mori densovirus (Parvoviridae), Boolarra virus (Nodaviridae), Boraceia virus (Bunyaviridae), Border disease virus (Flaviviridae), Boma disease virus, Botambi virus (Bunyaviridae), Boteke virus, (Rhabdoviridae), Bouboui virus (Flaviviridae), Bovine adeno-associated virus (Parvoviridae), Bovine adenoviruses (Adenoviridae), Bovine astrovirus (Astroviridae), Bovine coronavirus (Coronaviridae), Bovine diarrhea virus (Flaviviridae), Bovine encephalitis herpesvirus (Herpesviridae), Bovine enteric calicivirus (Caliciviridae), Bovine enterovirus (Picornaviridae), Bovine ephemeral fever virus (Rhabdoviridae), Bovine herpesvirus (Herpesviridae), Bovine immunodeficiency virus (Retroviridae), Bovine leukemia virus (Retroviridae), Bovine mamillitis virus (Herpesviridae), Bovine papillomavirus (Papovaviridae), Bovine papular stomatitis virus (Poxviridae), Bovine parainfluenza virus (Paramyxoviridae), Bovine parvovirus (Parvoviridae), Bovine polyomavirus (Papovaviridae), Bovine respiratory syncytial virus (Paramyxoviridae), Bovine rhinovirus (Picornaviridae), Bovine syncytial virus (Retroviridae), Bozo virus (Bunyaviridae), Broadhaven virus (Reoviridae), Bruconha virus (Bunyaviridae), Brus Laguna virus (Bunyaviridae), Budgerigar fledgling disease virus (Papovaviridae), Buenaventura virus (Bunyaviridae), Buffalopox virus (Poxviridae), Buggy Creek virus (Togaviridae), Bujaru virus (Bunyaviridae), Bukalasa bat virus (Flaviviridae), Bunyamwera virus (Bunyaviridae), Bunyip creek virus (Reoviridae), Bushbush virus (Bunyaviridae), Bussuquara virus (Flaviviridae), Bwamba virus (Bunyaviridae), Cache Valley virus (Bunyaviridae), Cacipacore virus (Flaviviridae), Caddo Canyon virus (Bunyaviridae), Caimito virus (Bunyaviridae), Calchaqui virus (Rhabdoviridae), California encephalitis virus (Bunyaviridae), California harbor sealpox virus (Poxviridae), Callistephus chinensis chlorosis virus (Rhabdoviridae), Callitrichine herpesvirus (Herpesviridae), Camel contagious ecthyma virus (Poxviridae), Camelpox virus (Poxviridae), Campytophronomus tentans entomopoxvirus (Poxviridae), Cananea virus (Bunyaviridae), Canarypox virus (Poxviridae), Candiru virus (Bunyaviridae), Canid herpesvirus (Herpesviridae), Caninde virus (Reoviridae), Canine adeno-associated virus (Parvoviridae), Canine adenovirus (Adenoviridae), Canine calicivirus (Caliciviridae), Canine coronavirus (Coronaviridae), Canine distemper virus (Paramyxoviridae), Canine herpesvirus (Herpesviridae), Canine minute virus (Parvoviridae), Canine oral papillomavirus (Papovaviridae), Canine parvovirus (Parvoviridae), Canna yellow mottle virus (Badnavirus), Cape Wrath virus (Reoviridae), Capim virus (Bunyaviridae), Caprine adenovirus (Adenoviridae), Caprine arthritis encephalitis virus (Retroviridae), Caprine herpesvirus (Herpesviridae), Capuchin herpesvirus AL- (Herpesviridae), Capuchin herpesvirus AP- (Herpesviridae), Carajas virus (Rhabdoviridae), Caraparu virus (Bunyaviridae), Carey Island virus (Flaviviridae), Casphalia extranea densovirus (Parvoviridae), Catu virus (Bunyaviridae), Caviid herpesvirus ((Herpesviridae)), CbaAr virus (Bunyaviridae), Cebine herpesvirus (Herpesviridae), Cercopithecine herpesvirus (Herpesviridae), Cervid herpesvirus (Herpesviridae), CG-virus (Bunyaviridae), Chaco virus (Rhabdoviridae), Chagres virus (Bunyaviridae), Chamois contagious ecthyma virus (Poxviridae), Chandipura virus (Rhabdoviridae), Changuinola virus (Reoviridae), Charleville virus (Rhabdoviridae), Chelonid herpesvirus (Herpesviridae), Chelonid herpesvirus (Herpesviridae), Cheloniid herpesvirus (Herpesviridae), Chenuda virus (Reoviridae), Chick syncytial virus (Retroviridae), Chicken anemia virus (Circoviridae), Chicken parvovirus (Parvoviridae), Chikungunya virus (Togaviridae), Chilbre virus (Bunyaviridae), Chim virus (Bunyaviridae), Chimpanzee herpesvirus (Herpesviridae), Chironomus attenuatus entomopoxvirus (Poxviridae), Chironomus luridus entomopoxvirus (Poxviridae), Chironomus plumosus entomopoxvirus (Poxviridae), Chobar Gorge virus (Reoviridae), Choristoneura biennis entomopoxvirus (Poxviridae), Choristoneura conflictata entomopoxvirus (Poxviridae), Choristoneura diversum entomopoxvirus (Poxviridae), Chorizagrotis auxiliars entomopoxvirus (Poxviridae), Chub reovirus Germany (Reoviridae), Ciconioid herpesvirus (Herpesviridae), Clo Mor virus (Bunyaviridae), CoAr virus (Bunyaviridae), Coastal Plains virus (Rhabdoviridae), Cocal virus (Rhabdoviridae), Coital exanthema virus (Herpesviridae), ColAn- virus (Bunyaviridae), Colocasia bobone disease virus, (Rhabdoviridae), Colorado tick fever virus, (Reoviridae), Columbia SK virus, (Picornaviridae), Columbid herpesvirus, (Herpesviridae), Connecticut virus, (Rhabdoviridae), Contagious ecthyma virus, (Poxviridae), Contagious pustular dermatitis virus, (Poxviridae), Corfu virus, (Bunyaviridae), Corripata virus, (Reoviridae), Cotia virus, (Poxviridae), Cowpox virus, (Poxviridae), Crimean-Congo hemorrhagic fever virus, (Bunyaviridae), CSIRO village virus, (Reoviridae), Cynara virus, (Rhabdoviridae), Cyprinid herpesvirus,

(Herpesviridae), Dabakala virus, (Bunyaviridae), D'Aguiar virus, (Reoviridae), Dakar bat virus, (Flaviviridae), DakArk virus, (Rhabdoviridae), Deer papillomavirus, (Papovaviridae), Demodema boranensis entomopoxvirus, (Poxviridae), Dengue virus, (Flaviviridae), Dengue virus group, (Flaviviridae), Dependovirus, (Parvoviridae), Dera Ghazi Khan virus, (Bunyaviridae), Dera Ghazi Khan virus Group, (Bunyaviridae), Dermolepida albohirtum entomopoxvirus, (Poxviridae), Dhoori virus, (Orthomyxoviridae), Diatraea saccharalis densovirus, (Parvoviridae), Dobrava-Belgrade virus, (Bunyaviridae), Dolphin distemper virus, (Paramyxoviridae), Dolphinpox virus, (Poxviridae), Douglas virus, (Bunyaviridae), Drosophila C virus, (Picornaviridae), Dry Tortugas virus, (Bunyaviridae), duck adenovirus, (Adenoviridae), Duck adenovirus, (Adenoviridae), Duck astrovirus, (Astroviridae), Duck hepatitis B virus, (Hepadnaviridae), Duck plague herpesvirus syn. anatid herpesvirus, (Herpesviridae), Dugbe virus, (Bunyaviridae), Duvenhage virus, (Rhabdoviridae), Eastern equine encephalitis virus, (Togaviridae), Ebola virus Filoviridae, Echinochloa hoja blanca virus; Genus Tenuivirus, Echinochloa ragged stunt virus, (Reoviridae), ectromelia virus, (Poxviridae), Edge Hill virus, (Flaviviridae), Egtved virus syn. viral hemorrhagic septicemia virus, (Rhabdoviridae), Elapid herpesvirus, (Herpesviridae), Elephant loxodontal herpesvirus, (Herpesviridae), Elephant papillomavirus, (Papovaviridae), Elephantid herpesvirus, (Herpesviridae), Ellidaey virus, (Reoviridae), Embu virus, (Poxviridae), Encephalomyocarditis virus, (Picornaviridae), Enseada virus, (Bunyaviridae), Entamoeba virus, (Rhabdoviridae), Entebbe bat virus, (Flaviviridae), Epizootic hemorrhagic disease viruses, (Reoviridae), Epstein-Barr virus, (Herpesviridae), Equid herpesvirus, (Herpesviridae), Equid herpesvirus, (Nerpesviridae), Equid herpesvirus, (Herpesviridae), Equine abortion herpesvirus, (Herpesviridae), Equine adeno-associated 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(Reoviridae), Facey's Paddock virus, (Bunyaviridae), Falcon inclusion body disease, (Herpesviridae), Falconid herpesvirus, (Herpesviridae), Farallon virus, (Bunyaviridae), Felid herpesvirus, (Herpesviridae), Feline calicivirus, (Caliciviridae), Feline herpesvirus, (Herpesviridae), Feline immunodeficiency virus, (Retroviridae), Feline infectious peritonitis virus, (Coronaviridae), Feline leukemia virus, (Retroviridae), Feline parvleukopenia virus, (Parvoviridae), Feline parvovirus, (Parvoviridae), Feline syncytial virus, (Retroviridae), Feline viral rhinotracheitis virus, (Herpesviridae), Fetal rhesus kidney virus, (Papovaviridae), Field mouse herpesvirus, (Herpesviridae), Figulus subleavis entomopoxvirus, (Poxviridae), Fiji disease virus, (Reoviridae), Fin V- virus, (Bunyaviridae), Finkel-Biskis-Jenkins murine sarcoma virus, (Retroviridae), Flanders virus, (Rhabdoviridae), Flexal virus, (Arenaviridae), Flock house virus, Nodaviridae, Foot-and-mouth disease virus A, (Picornaviridae), Foot-and-mouth disease virus ASIA, (Picornaviridae), Foot-and-mouth disease virus, (Picornaviridae), Forecariah virus, (Bunyaviridae), Fort Morgan virus, (Togaviridae), Fort Sherman virus, (Bunyaviridae), Foula virus, (Reoviridae), Fowl adenoviruses, (Adenoviridae), Fowl calicivirus, (Caliciviridae), Fowlpox virus, (Poxviridae), Fraser Point virus, (Bunyaviridae), Friend murine leukemia virus, (Retroviridae), Frijoles virus, (Bunyaviridae), Frog herpesvirus, (Herpesviridae), Fromede virus, (Reoviridae), Fujinami sarcoma virus, (Retroviridae), Fukuoka virus, (Rhabdoviridae), Gabek Forest virus, (Bunyaviridae), Gadget's Gully virus, (Flaviviridae), Galleria mellonella densovirus, (Parvoviridae), Gallid herpesvirus, (Herpesviridae), Gamboa virus, (Bunyaviridae), Gan Gan virus, (Bunyaviridae), Garba virus, (Rhabdoviridae), Gardner-Armstein feline sarcoma virus, (Retroviridae), Geochelone carbonaria herpesvirus, (Herpesviridae), Geochelone chilensis herpesvirus, (Herpesviridae), Geotrupes 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herpesvirus, (Herpesviridae), Grey kangaroopox virus, (Poxviridae), Grimsey virus, (Reoviridae), Ground squirrel hepatitis B virus, (Hepadnaviridae), Group A-K rotaviruses, (Reoviridae), Gruid herpesvirus, (Herpesviridae), GUU- virus, (Bunyaviridae), Guajara virus, (Bunyaviridae), Guama virus, (Bunyaviridae), Guanarito virus, (Arenaviridae), Guaratuba virus, (Bunyaviridae), Guaroa virus, (Bunyaviridae), Guinea pig cytomegalovirus, (Herpesviridae), Guinea pig herpesvirus, (Herpesviridae), Guinea pig type C oncovirus, (Retroviridae), Gumbo Limbo virus, (Bunyaviridae), Gurupi virus, (Reoviridae), H- virus, (Parvoviridae), H virus, (Bunyaviridae), Hamster herpesvirus, (Herpesviridae), Hamster polyomavirus, (Papovaviridae), Hantaan virus, (Bunyaviridae), Hanzalova virus, (Flaviviridae), Hardy-Zuckerman feline sarcoma virus, (Retroviridae), Hare fibroma virus, (Poxviridae), Hart Park virus, (Rhabdoviridae),

Hartebeest herpesvirus, (Herpesviridae), Harvey murine sarcoma virus, (Retroviridae), Hazara virus, (Bunyaviridae),
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 Herpesvirus M, (Herpesviridae), Herpesvirus papio, (Herpesviridae), Herpesvirus platyrrhinae type, (Herpesviridae),
 Herpesvirus pottos, (Herpesviridae), Herpesvirus saimiri, (Herpesviridae), Herpesvirus salmonis, (Herpesviridae), Her-
 pesvirus sanguinus, (Herpesviridae), Herpesvirus scophthalmus, (Herpesviridae), Herpesvirus sylvilagus, (Herpesviri-
 dae), Herpesvirus T, (Herpesviridae), Herpesvirus tarnarinus, (Herpesviridae), Highlands J virus, (Togaviridae), Hirame
 5 rhabdovirus, (Rhabdoviridae), Hog cholera virus, (Flaviviridae), HoJo virus, (Bunyaviridae), Hepatitis delta virus, Satel-
 lites, Deltavirus, Hsiung Kaplow herpesvirus, (Herpesviridae), Hepatitis E virus, (Caliciviridae), Hepatopancreatic parvo-
 like virus of shrimps, (Parvoviridae), Heron hepatitis B virus, (Hepadnaviridae), Herpes ateles, (Herpesviridae), Herpes
 10 simiae virus, (Herpesviridae), Herpes simplex virus, (Herpesviridae), Herpes virus B, (Herpesviridae), Herpesvirus aotus,
 (Herpesviridae), Herpesvirus ateles strain, (Herpesviridae), Herpesvirus cuniculi, (Herpesviridae), Herpesvirus cyclopsis,
 (Herpesviridae), Huacho virus, (Reoviridae), Hughes virus, (Bunyaviridae), Human adenoviruses, (Adenoviridae), Hu-
 man astrovirus, (Astroviridae), Human calicivirus, (Caliciviridae), Human caliciviruses, (Caliciviridae), Human coronavirus
 E, (Coronaviridae), Human coronavirus OC, (Coronaviridae), Human coxsackievirus, (Picornaviridae), Human cytome-
 galovirus, (Herpesviridae), Human echovirus, (Picornaviridae), Human enterovirus, (Picornaviridae), Human foamy virus,
 15 (Retroviridae), Human herpesvirus, (Herpesviridae), Human herpesvirus, (Herpesviridae), Human herpesvirus, (Herpes-
 viridae), Human immunodeficiency virus, (Retroviridae), Human papillomavirus, (Papovaviridae), Human parainfluenza
 virus, (Paramyxoviridae), Human poliovirus, (Picornaviridae), Human respiratory syncytial virus, (Paramyxoviridae),
 Human rhinovirus, (Picornaviridae), Human spumavirus, (Retroviridae), Human T-lymphotropic virus, (Retroviridae),
 20 Humpty Doo virus, (Rhabdoviridae), HV- virus, (Bunyaviridae), Hypr virus, (Flaviviridae), Laco virus, (Bunyaviridae),
 Ibaraki virus, (Reoviridae), Icoaraci virus, (Bunyaviridae), Ictalurid herpesvirus, (Herpesviridae), Leri virus, (Reoviridae),
 Ife virus, (Reoviridae), Iguanid herpesvirus, (Herpesviridae), Ilesha virus, (Bunyaviridae), Ilheus virus, (Flaviviridae),
 Inclusion body rhinitis virus, (Herpesviridae), Infectious bovine rhinotracheitis virus, (Herpesviridae), Infectious bursal
 disease virus, (Bunyaviridae), Infectious hematopoietic necrosis virus, (Rhabdoviridae), Infectious laryngotracheitis virus,
 25 (Herpesviridae), Infectious pancreatic necrosis virus, (Bunyaviridae), Influenza A virus (A/PR//HN), (Orthomyxoviridae),
 Influenza B virus (B/Lee/), (Orthomyxoviridae), Influenza C virus (C/California/), (Orthomyxoviridae), Ingwavuma virus,
 (Bunyaviridae), Inini virus, (Bunyaviridae), Inkoo virus, (Bunyaviridae), Inner Farne virus, (Reoviridae), Ippy virus, (Are-
 naviridae), Irituia virus, (Reoviridae), Isfahan virus, (Rhabdoviridae), Israel turkey meningoencephalitis virus, (Flaviviri-
 dae), Issyk-Kul virus, (Bunyaviridae), Itaituba virus, (Bunyaviridae), Itaporanga virus, (Bunyaviridae), Itaqui virus, (Bun-
 30 yaviridae), Itimirim virus, (Bunyaviridae), Itupiranga virus, (Reoviridae), Jaagsiekte virus, (Retroviridae), Jacareacanga
 virus, (Reoviridae), Jamanxi virus, (Reoviridae), Jamestown Canyon virus, (Bunyaviridae), Japanaut virus, (Reoviridae),
 Japanese encephalitis virus, (Flaviviridae), Jari virus, (Reoviridae), JC virus, (Papovaviridae), Joa virus, (Bunyaviridae),
 Joinjakaka virus, (Rhabdoviridae), Juan Diaz virus, (Bunyaviridae), Jugra virus, (Flaviviridae), Juncopox virus, (Poxviri-
 dae), Junin virus, (Arenaviridae), Junonia coenia densovirus, (Parvoviridae), Jurona virus, (Rhabdoviridae), Jutiapa
 35 virus, (Flaviviridae), K virus, (Papovaviridae), K virus, (Bunyaviridae), Kachemak Bay virus, (Bunyaviridae), Kadarn virus,
 (Flaviviridae), Kaeng Khoi virus, (Bunyaviridae), Kaikalur virus, (Bunyaviridae), Kairi virus, (Bunyaviridae), Kaisodi virus,
 (Bunyaviridae), Kala Iris virus, (Reoviridae), Kamese virus, (Rhabdoviridae), Karmavanpettai virus, (Reoviridae), Kan-
 namangalam virus, (Rhabdoviridae), Kao Shuan virus, (Bunyaviridae), Karimabad virus, (Bunyaviridae), Karshi virus,
 (Flaviviridae), Kasba virus, (Reoviridae), Kasokero virus, (Bunyaviridae), Kedougou virus, (Flaviviridae), Kemerovo virus,
 40 (Reoviridae), Kenai virus, (Reoviridae), Kennedya virus Y, (Potyviridae), Kern Canyon Yirus, (Rhabdoviridae), Ketapang
 virus, (Bunyaviridae), Keterah virus, (Bunyaviridae), Keuraliba virus, (Rhabdoviridae), Keystone virus, (Bunyaviridae),
 Kharagys virus, (Reoviridae), Khasan virus, (Bunyaviridae), Kilham rat virus, (Parvoviridae), Kimberley virus, (Rhab-
 doviridae), Kindia virus, (Reoviridae), Kinkajou herpesvirus, (Herpesviridae), Kirsten murine sarcoma yirus, (Retroviri-
 dae), Kismayo virus, (Bunyaviridae), Klamath virus, (Rhabdoviridae), Kokobera virus, (Flaviviridae), Kolongo virus, (Rhab-
 45 doviridae), Koolpinyah virus, (Rhabdoviridae), Koongol virus, (Bunyaviridae), Kotonkan virus, (Rhabdoviridae), Koutango
 virus, (Flaviviridae), Kowanyama virus, (Bunyaviridae), Kumlinge virus, (Flaviviridae), Kunjin virus, (Flaviviridae), Kwatta
 virus, (Rhabdoviridae), Kyzylagach virus, (Togaviridae), La Crosse virus, (Bunyaviridae), La Joya virus, (Rhabdoviridae),
 La-Piedad-Michoacan-Mexico virus, (Paramyxoviridae), Lacertid herpesvirus, (Herpesviridae), Lactate dehydrogenase-
 elevating virus, (Arterivirus), Lagos bat virus, (Rhabdoviridae), Lake Clarendon virus, (Reoviridae), Lake Victoria cor-
 50 morant herpesvirus, (Herpesviridae), Langat virus, (Flaviviridae), Langur virus, (Retroviridae), Lanjan virus, (Bunyaviridae),
 Lapine parvovirus, (Parvoviridae), Las Maloyas virus, (Bunyaviridae), Lassa virus, (Arenaviridae), Lato river virus, (Tom-
 busviridae), Le Dantec virus, (Rhabdoviridae), Leanyer virus, (Bunyaviridae), Lebombo virus, (Reoviridae), Lednice
 virus, (Bunyaviridae), Lee virus, (Bunyaviridae), Leporid herpesvirus, (Herpesviridae), Leucorhinia dubia densovirus,
 (Parvoviridae), Lipovnik virus, (Reoviridae), Liverpool vervet monkey virus, (Herpesviridae), Llano Seco virus, (Reoviri-
 55 dae), Locusta migratoria entomopoxvirus, (Poxviridae), Lokem virus, (Bunyaviridae), Lone Star virus, (Bunyaviridae),
 Lorisine herpesvirus, (Herpesviridae), Louping ill virus, (Flaviviridae), Lucke frog herpesvirus, (Herpesviridae), Lum virus,
 (Parvoviridae), Lukuni virus, (Bunyaviridae), Lumpy skin disease virus, (Poxviridae), Lundy virus, (Reoviridae), Lymantria
 dubia densovirus, (Parvoviridae), Lymphocytic choriomeningitis virus, (Arenaviridae), Machupo virus, (Arenaviridae),

Macropodid herpesvirus (Herpesviridae), Madrid virus, (Bunyaviridae), Maguari virus, (Bunyaviridae), Main Drain virus, (Bunyaviridae), Malakal virus, (Rhabdoviridae), Malignant catarrhal fever virus of European cattle, (Herpesviridae), Malpais Spring virus, (Rhabdoviridae), Malva silvestris virus, (Rhabdoviridae), Manawa virus, (Bunyaviridae), Manawatu virus, (Nodaviridae), Manitoba virus, (Rhabdoviridae), Manzanilla virus, (Bunyaviridae), Map turtle herpesvirus, (Herpesviridae), Mapputta virus, (Bunyaviridae), Maprik virus, (Bunyaviridae), Maraba virus, (Rhabdoviridae), Marburg virus, (Filoviridae), Marco virus, (Rhabdoviridae), Marek's disease herpesvirus, (Herpesviridae), Marituba virus, (Bunyaviridae), Marmodid herpesvirus, (Herpesviridae), Marmoset cytomegalovirus, (Herpesviridae), Marmoset herpesvirus, (Herpesviridae), Marmosetpox virus, (Poxviridae), Marrakai virus, (Reoviridae), Mason-Pfizer monkey virus, (Retroviridae), Masou salmon reovirus, (Reoviridae), Matruh virus, (Bunyaviridae), Matucare virus, (Reoviridae), Mayaro virus, (Togaviridae), Mboke virus, (Bunyaviridae), Meaban virus, (Flaviviridae), Measles (Edmonston) virus, (Paramyxoviridae), Medical Lake macaque herpesvirus, (Herpesviridae), Melanoplus sanguinipes entomopoxvirus, (Poxviridae), Melao virus, (Bunyaviridae), Meleagrid herpesvirus, (Herpesviridae), Mellilotus latent virus, (Rhabdoviridae), Melolontha melolontha entomopoxvirus, (Poxviridae), Mengovirus, (Picornaviridae), Mermet virus, (Bunyaviridae), Mice minute virus, (Parvoviridae), Mice pneumotropic virus, (Papovaviridae), Microtus pennsylvanicus herpesvirus, (Herpesviridae), Middelburg virus, (Togaviridae), Miller's nodule virus, (Poxviridae), Mill Door virus, (Reoviridae), Minatitlan virus, (Bunyaviridae), Mink calicivirus, (Caliciviridae), Mink enteritis virus, (Parvoviridae), Minnal virus, (Reoviridae), Mirabilis mosaic virus, Caulimovirus, Mirim virus, (Bunyaviridae), Mitchell river virus, (Reoviridae), Mobala virus, (Arenaviridae), Modoc virus, (Flaviviridae), Moju virus, (Bunyaviridae), Mojui dos Campos virus, (Bunyaviridae), Mokola virus, (Rhabdoviridae), Molluscum contagiosum virus, (Poxviridae), Molluscum-likepox virus, (Poxviridae), Moloney murine sarcoma virus, (Retroviridae), Moloney virus, (Retroviridae), Monkey pox virus, (Poxviridae), Mono Lake virus, (Reoviridae), Montana myotis leukoencephalitis virus, (Flaviviridae), Monte Dourado virus, (Reoviridae), Mopeia virus, (Arenaviridae), Moriche virus, (Bunyaviridae), Mosqueiro virus, (Rhabdoviridae), Mossuril virus, (Rhabdoviridae), Mount Elgon bat virus, (Rhabdoviridae), Mouse cytomegalovirus, (Herpesviridae), Mouse Elberfield virus, (Picornaviridae), Mouse herpesvirus strain, (Herpesviridae), Mouse mammary tumor virus, (Retroviridae), Mouse thymic herpesvirus, (Herpesviridae), Movar herpesvirus, (Herpesviridae), Mucambo virus, (Togaviridae), Mudjinbarry virus, (Reoviridae), Muir Springs virus, (Rhabdoviridae), Mule deerpox virus, (Poxviridae), Multimammate mouse papillomavirus, (Papovaviridae), Mumps virus, (Paramyxoviridae), Murid herpesvirus, (Herpesviridae), Murine adenovirus, (Adenoviridae), Z murine adenovirus, (Adenoviridae), Murine hepatitis virus, (Coronaviridae), Murine herpesvirus, (Herpesviridae), Murine leukemia virus, (Retroviridae), Murine parainfluenza virus, (Paramyxoviridae), Murine poliovirus, (Picornaviridae), Murine polyomavirus, (Papovaviridae), Murray Valley encephalitis virus, (Flaviviridae), Murre virus, (Bunyaviridae), Murutucu virus, (Bunyaviridae), Mykines virus, (Reoviridae), Mynahpox virus, (Poxviridae), Myxoma virus, (Poxviridae), Nairobi sheep disease virus, (Bunyaviridae), Naranjal virus, (Flaviviridae), Nasoule virus, (Rhabdoviridae), Navarro virus, (Rhabdoviridae), Ndelle virus, (Reoviridae), Ndumu virus, (Togaviridae), Neckar river virus, (Tombusviridae), Negishi virus, (Flaviviridae), Nelson Bay virus, New Minto virus, (Rhabdoviridae), Newcastle disease virus, (Paramyxoviridae), Ngaingan virus, (Rhabdoviridae), Ngari virus, (Bunyaviridae), Ngoupe virus, (Reoviridae), Nile crocodilepox virus, (Poxviridae), Nique virus, (Bunyaviridae), Nkolbisson virus, (Rhabdoviridae), Nola virus, (Bunyaviridae), North Clett virus, (Reoviridae), North End virus, (Reoviridae), Northern cereal mosaic virus, (Rhabdoviridae), Northern pike herpesvirus, (Herpesviridae), Northway virus, (Bunyaviridae), Norwalk virus, (Caliciviridae), Ntaya virus, (Flaviviridae), Nugget virus, (Reoviridae), Nyabira virus, (Reoviridae), Nyamanini virus, Unassigned, Nyando virus, (Bunyaviridae), Oak-Vale virus, (Rhabdoviridae), Obodhiang virus, (Rhabdoviridae), Oceanside virus, (Bunyaviridae), Ockelbo virus, (Togaviridae), Odrenisrou virus, (Bunyaviridae), Oedaleus senegalensis entomopoxvirus, (Poxviridae), Oita virus, (Rhabdoviridae), Okhotskiy virus, (Reoviridae), Okola virus, (Bunyaviridae), Olifantsvlei virus, (Bunyaviridae), Omo virus, (Bunyaviridae), Omsk hemorrhagic fever virus, (Flaviviridae), Onchorhynchus masou herpesvirus, (Herpesviridae), O'nyong-nyong virus, (Togaviridae), Operophtera brunnata entomopoxvirus, (Poxviridae), Orangutan herpesvirus, (Herpesviridae), Orf virus, (Poxviridae), Oriboca virus, (Bunyaviridae), Oriximina virus, (Bunyaviridae), Oropouche virus, (Bunyaviridae), Orungo virus, (Reoviridae), Oryctes rhinoceros virus, Unassigned, Ossa virus, (Bunyaviridae), Ouango virus, (Rhabdoviridae), Oubi virus, (Bunyaviridae), Ourem virus, (Reoviridae), Ovine adeno-associated virus, (Parvoviridae), Ovine adenoviruses, (Adenoviridae), (Astroviridae), Ovine herpesvirus, (Herpesviridae), Ovine pulmonary adenocarcinoma virus, (Retroviridae), Owl hepatosplenitis herpesvirus, (Herpesviridae), P virus, (Bunyaviridae), Pacheco's disease virus, (Herpesviridae), Pacora virus, (Bunyaviridae), Pacui virus, (Bunyaviridae), Pahayokee virus, (Bunyaviridae), Palestina virus, (Bunyaviridae), Palyam virus, (Reoviridae), Pan herpesvirus, (Herpesviridae), Papio Epstein-Barr herpesvirus, (Herpesviridae), Para virus, (Bunyaviridae), Paramushir virus, (Bunyaviridae), Parana virus, (Arenaviridae), Parapoxvirus of red deer in New Zealand, (Poxviridae), Paravaccinia virus, (Poxviridae), Parma wallaby herpesvirus, (Herpesviridae), Paroo river virus, (Reoviridae), Parrot herpesvirus, (Herpesviridae), Parry Creek virus, (Rhabdoviridae), Pata virus, (Reoviridae), Patas monkey herpesvirus pH delta, (Herpesviridae), Pathum Thani virus, (Bunyaviridae), Patois virus, (Bunyaviridae), Peaton virus, (Bunyaviridae), Percid herpesvirus, (Herpesviridae), Perdicid herpesvirus, (Herpesviridae), Perinet virus, (Rhabdoviridae), Periplaneta fuliginosa densovirus, (Parvoviridae), Peste-des-petits-ruminants virus, (Paramyxoviridae), Petevo virus, (Reoviridae), Phalacrocoracid herpesvirus, (Herpesviridae), Pheasant adenovirus, (Adenoviridae), Phnom-Penh bat virus, (Flaviviridae),

Phocid herpesvirus, (Herpesviridae), Phocine (seal) distemper virus, (Paramyxoviridae), Pichinde virus, (Arenaviridae), Picola virus, (Reoviridae), Pieris rapae densovirus, (Parvoviridae), Pigeon herpesvirus, (Herpesviridae), Pigeonpox virus, (Poxviridae), Badnavirus Piry virus, (Rhabdoviridae), Pisum virus, (Rhabdoviridae), Pixuna virus, (Togaviridae), Playas virus, (Bunyaviridae), Pleuronectid herpesvirus, (Herpesviridae), Pneumonia virus of mice, (Paramyxoviridae), Pongine herpesvirus, (Herpesviridae), Pongola virus, (Bunyaviridae), Ponteves virus, (Bunyaviridae), Poovoot virus, (Reoviridae), Porcine adenoviruses, (Adenoviridae), Porcine astrovirus, (Astroviridae), Porcine circovirus, (Circoviridae), Porcine enteric calicivirus, (Caliciviridae), Porcine enterovirus, (Picornaviridae), Porcine epidemic diarrhea virus, (Coronaviridae), Porcine hemagglutinating encephalomyelitis virus, (Coronaviridae), Porcine parvovirus, (Parvoviridae), Porcine respiratory and reproductive syndrome, (Arterivirus), Porcine rubulavirus, (Paramyxoviridae), Porcine transmissible gastroenteritis virus, (Coronaviridae), Porcine type C oncovirus, (Retroviridae), Porton virus, (Rhabdoviridae), Potosi virus, (Bunyaviridae), Powassan virus, (Flaviviridae), Precarious Point virus, (Bunyaviridae), Pretoria virus, (Bunyaviridae), Primate calicivirus, (Caliciviridae), Prospect Hill virus, (Bunyaviridae), Pseudaletia includens densovirus, (Parvoviridae), Pseudocowpox virus, (Poxviridae), Pseudolumphy skin disease virus, (Herpesviridae), Pseudorabies virus, (Herpesviridae), Psittacid herpesvirus, (Herpesviridae), Psittacinepox virus, (Poxviridae), Puchong virus, (Rhabdoviridae), Pueblo Viejo virus, (Bunyaviridae), Puffin Island virus, (Bunyaviridae), Punta Salinas virus, (Bunyaviridae), Punta Toro virus, (Bunyaviridae), Purus virus, (Reoviridae), Puumala virus, (Bunyaviridae), Qalyub virus, (Bunyaviridae), Quailpox virus, (Poxviridae), Quokkapox virus, (Poxviridae), Rabbit coronavirus, (Coronaviridae), Rabbit fibroma virus, (Poxviridae), Rabbit hemorrhagic disease virus, (Caliciviridae), Rabbit kidney vacuolating virus, (Papovaviridae), Rabbit oral papillomavirus, (Papovaviridae), Rabbitpox virus, (Poxviridae), Rabies virus, (Rhabdoviridae), Raccoon parvovirus, (Parvoviridae), Raccoonpox virus, (Poxviridae), Radi virus, (Rhabdoviridae), Rangifer tarandus herpesvirus, (Herpesviridae), Ranid herpesvirus, (Herpesviridae), Raphanus virus, (Rhabdoviridae), Rat coronavirus, (Coronaviridae), Rat cytomegalovirus, (Herpesviridae), Rat virus, R, (Parvoviridae), Raza virus, (Bunyaviridae), Razdan virus, (Bunyaviridae), Red deer herpesvirus, (Herpesviridae), Red kangaroopox virus, (Poxviridae), Reed Ranch virus, (Rhabdoviridae), herpesvirus, (Herpesviridae), Reindeer papillomavirus, (Papovaviridae), Reptile calicivirus, (Caliciviridae), Resistencia virus, (Bunyaviridae), Restan virus, (Bunyaviridae), Reticuloendotheliosis virus, (Retroviridae), Rhesus HHV-like virus, (Herpesviridae), Rhesus leukocyte associated herpesvirus strain, (Herpesviridae), Rhesus monkey cytomegalovirus, (Herpesviridae), Rhesus monkey papillomavirus, (Papovaviridae), Rheumatoid arthritis virus, (Parvoviridae), Rift Valley fever virus, (Bunyaviridae), Rinderpest virus, (Paramyxoviridae), Rio Bravo virus, (Flaviviridae), Rio Grande virus, (Bunyaviridae), RML virus, (Bunyaviridae), Rochambeau virus, (Rhabdoviridae), Rocio virus, (Flaviviridae), Ross River virus, (Togaviridae), Rost Islands virus, (Reoviridae), Rous sarcoma virus, (Retroviridae), Royal farm virus, (Flaviviridae), RT parvovirus, (Parvoviridae), Rubella virus, (Togaviridae), Russian spring summer encephalitis virus, (Flaviviridae), S-- virus, (Reoviridae), SA virus, (Herpesviridae), Sabio virus, (Arenaviridae), Sabo virus, (Bunyaviridae), Saboya virus, (Flaviviridae), Sacbrood virus, (Picornaviridae), Sagiyama virus, (Togaviridae), Saimiriine herpesvirus, (Herpesviridae), SaintAbb's Head virus, (Reoviridae), Saint-Floris virus, (Bunyaviridae), Sakhalin virus, (Bunyaviridae), Sal Vieja virus, (Flaviviridae), Salanga virus, (Bunyaviridae), Salangapox virus, (Poxviridae), Salehabad virus, (Bunyaviridae), Salmonid herpesvirus, (Herpesviridae), Salmonis virus, (Rhabdoviridae), Sambucus vein clearing virus, (Rhabdoviridae), SanAngelo virus, (Bunyaviridae), San Juan virus, (Bunyaviridae), San Miguel sealion virus, (Caliciviridae), San Perlita virus, (Flaviviridae), Sand rat nuclear inclusion agents, (Herpesviridae), Sandfly fever Naples virus, (Bunyaviridae), Sandfly fever Sicilian virus, (Bunyaviridae), Sandjimba virus, (Rhabdoviridae), Sango virus, (Bunyaviridae), Santa Rosa virus, (Bunyaviridae), Santarem virus, (Bunyaviridae), Sapphire II virus, (Bunyaviridae), Saraca virus, (Reoviridae), Sarracenia purpurea virus, (Rhabdoviridae), Sathuperi virus, (Bunyaviridae), Saumarez Reef virus, (Flaviviridae), Sawgrass virus, (Rhabdoviridae), Schistocerca gregaria entomopoxvirus, (Poxviridae), Sciurid herpesvirus, (Herpesviridae), Sciurid herpesvirus, (Herpesviridae), Sealpox virus, (Poxviridae), Seletar virus, (Reoviridae), Semliki Forest virus, (Togaviridae), Sena Madureira virus, (Rhabdoviridae), Sendai virus, (Paramyxoviridae), Seoul Virus, (Bunyaviridae), Sepik virus, (Flaviviridae), Serra do Navio virus, (Bunyaviridae), Shamonda virus, (Bunyaviridae), Shark River virus, (Bunyaviridae), Sheep associated malignant catarrhal fever of, (Herpesviridae), Sheep papillomavirus, (Papovaviridae), Sheep pulmonary adenomatosis associated herpesvirus, (Herpesviridae), Sheeppox virus, (Poxviridae), Shiant Islands virus, (Reoviridae), Shokwe virus, (Bunyaviridae), Shope fibroma virus, (Poxviridae), Shuni virus, (Bunyaviridae), Sibine fusca densovirus, (Parvoviridae), Sigma virus, (Rhabdoviridae), Sikte water-borne virus, (Tombusviridae), Silverwater virus, (Bunyaviridae), virus, (Bunyaviridae), Simian adenoviruses, (Adenoviridae), Simian agent virus, (Papovaviridae), Simian enterovirus, (Picornaviridae), Simian foamy virus, (Retroviridae), Simian hemorrhagic fever virus, (Arterivirus), Simian hepatitis A virus, (Picornaviridae), Simian immunodeficiency virus, (Retroviridae), Simian parainfluenza virus, (Paramyxoviridae), Simian rotavirus SA, (Reoviridae), Simian sarcoma virus, (Retroviridae), Simian T-lymphotropic virus, (Retroviridae), Simian type D virus, (Retroviridae), Simian vancella herpesvirus, (Herpesviridae), Simian virus, (Papovaviridae), Simulium vittatum densovirus, (Parvoviridae), Sindbis virus, (Togaviridae), Sixgun city virus, (Reoviridae), Skunkpox virus, (Poxviridae), Smelt reovirus, (Reoviridae), Snakehead rhabdovirus, (Rhabdoviridae), Snowshoe hare virus, (Bunyaviridae), Snyder-Theilen feline sarcoma virus, (Retroviridae), Sofyn virus, (Flaviviridae), Sokoluk virus, (Flaviviridae), Soldado virus, (Bunyaviridae), Somerville virus, (Reoviridae), Sparrowpox virus, (Poxviridae), Spectacled caimanpox virus, (Poxviridae),

SPH virus, (Arenaviridae), Sphenicid herpesvirus, (Herpesviridae), Spider monkey herpesvirus, (Herpesviridae), Spondweni virus, (Flaviviridae), Spring viremia of carp virus, (Rhabdoviridae), Squirrel fibroma virus, (Poxviridae), Squirrel monkey herpesvirus, (Herpesviridae), Squirrel monkey retrovirus, (Retroviridae), SR- virus, (Bunyaviridae), Sripur virus, (Rhabdoviridae), StAbbs Head virus, (Bunyaviridae), St. Louis encephalitis virus, (Flaviviridae), Starlingpox virus, (Poxviridae), Stratford virus, (Flaviviridae), Strigid herpesvirus, (Herpesviridae), Striped bass reovirus, (Reoviridae), Striped Jack nervous necrosis virus, (Nodaviridae), Stump-tailed macaque virus, (Papovaviridae), Suid herpesvirus, (Herpesviridae), Sunday Canyon virus, (Bunyaviridae), Sweetwater Branch virus, (Rhabdoviridae), Swine cytomegalovirus, (Herpesviridae), Swine infertility and respiratory syndrome virus, (Arterivirus), Swinepox virus, (Poxviridae), Tacaiuma virus, (Bunyaviridae), Tacaribe virus, (Arenaviridae), Taggart virus, (Bunyaviridae), Tahyna virus, (Bunyaviridae), Tai virus, (Bunyaviridae), Taiassui virus, (Bunyaviridae), Tamana bat virus, (Flaviviridae), Tamdy virus, (Bunyaviridae), Tamiami virus, (Arenaviridae), Tanapox virus, (Poxviridae), Tanga virus, (Bunyaviridae), Tanjong Rabok virus, (Bunyaviridae), Taro bacilliform virus, (Badnavirus), Tataguine virus, (Bunyaviridae), Taterapox virus, (Poxviridae), Tehran virus, (Bunyaviridae), Telok Forest virus, (Bunyaviridae), Tembe virus, (Reoviridae), Tembusu virus, (Flaviviridae), Tench reovirus, (Reoviridae), Tensaw virus, (Bunyaviridae), Tephrosia symptomless virus, (Tombusviridae), Termeil virus, (Bunyaviridae), Tete virus, (Bunyaviridae), Thailand virus, (Bunyaviridae), Theiler's murine encephalomyelitis virus, (Picornaviridae), Thermoproteus virus, Lipothrixviridae, Thiafora virus, (Bunyaviridae), Thimiri virus, (Bunyaviridae), Thogoto virus, (Orthomyxoviridae), Thomodseyjarklettur virus, (Reoviridae), Thottapalayam virus, (Bunyaviridae), Tibrogargan virus, (Rhabdoviridae), Tick-borne encephalitis virus, (Flaviviridae), Tillamook virus, (Bunyaviridae), Tilligerry virus, (Reoviridae), Timbo virus, (Rhabdoviridae), Tilmboteua virus, (Bunyaviridae), Tilmaroo virus, (Bunyaviridae), Tindholum virus, (Reoviridae), Tlacotalpan virus, (Bunyaviridae), Toscana virus, (Bunyaviridae), Tradescantia/Zebrina virus, Potyviridae, Trager duck spleen necrosis virus, (Retroviridae), Tree shrew adenovirus, (Adenoviridae), Tree shrew herpesvirus, (Herpesviridae), Triatoma virus, (Picornaviridae), Tribec virus, (Reoviridae), Trivittatus virus, (Bunyaviridae), Trombetas virus, (Bunyaviridae), Trubanaman virus, (Bunyaviridae), Tsuruse virus, (Bunyaviridae), Tucunduba virus, (Bunyaviridae), Tumor virus X, (Parvoviridae), Tupaia virus, (Rhabdoviridae), Tupaiid herpesvirus, (Herpesviridae), Turbot herpesvirus, (Herpesviridae), Turbot reovirus, (Reoviridae), Turkey adenoviruses, (Adenoviridae), Turkey coronavirus, (Coronaviridae), Turkey herpesvirus, (Herpesviridae), Turkey rhinotracheitis virus, (Paramyxoviridae), Turkeypox virus, (Poxviridae), Turlock virus, (Bunyaviridae), Turuna virus, (Bunyaviridae), Tyuleniy virus, (Flaviviridae), Uasin Gishu disease virus, (Poxviridae), Uganda S virus, (Flaviviridae), Ulcerative disease rhabdovirus, (Rhabdoviridae), Umatilla virus, (Reoviridae), Umbre virus, (Bunyaviridae), Una virus, (Togaviridae), Upolu virus, (Bunyaviridae), UR sarcoma virus, (Retroviridae), Urucuri virus, (Bunyaviridae), Usutu virus, (Flaviviridae), Utinga virus, (Bunyaviridae), Uti virus, (Bunyaviridae), Uukuniemi virus, (Bunyaviridae), Vaccinia subspecies, (Poxviridae), Vaccinia virus, (Poxviridae), Vaeroy virus, (Reoviridae), Varicella-zoster virus, (Herpesviridae), Variola virus, (Poxviridae), Vellore virus, (Reoviridae), Venezuelan equine encephalitis virus, (Togaviridae), Vesicular exanthema of swine virus, (Caliciviridae), Vesicular stomatitis Alagoas virus, (Rhabdoviridae), Vesicular stomatitis Indiana virus, (Rhabdoviridae), Vesicular stomatitis New Jersey virus, (Rhabdoviridae), Vilyuisk virus, (Picornaviridae), Vines virus, (Bunyaviridae), Viper retrovirus, (Retroviridae), Viral hemorrhagic septicemia virus, (Rhabdoviridae), Virgin River virus, (Bunyaviridae), Virus III, (Herpesviridae), Visna/maedi virus, (Retroviridae), Volepoxvirus, (Poxviridae), Wad Medani virus, (Reoviridae), Wallal virus, (Reoviridae), Walleye epidermal hyperplasia, (Herpesviridae), Wanowrie virus, (Bunyaviridae), Warrego virus, (Reoviridae), Weddel water-borne virus, (Tombusviridae), Weldon virus, (Bunyaviridae), Wesselsbron virus, (Flaviviridae), West Nile virus, (Flaviviridae), Western equine encephalitis virus, (Togaviridae), Wexford virus, (Reoviridae), Whataroa virus, (Togaviridae), Wildbeest herpesvirus, (Herpesviridae), Witwatersrand virus, (Bunyaviridae), Wongal virus, (Bunyaviridae), Wongorr virus, (Reoviridae), Woodchuck hepatitis B virus, (Hepadnaviridae), Woodchuck herpesvirus marmota, (Herpesviridae), Woolly monkey sarcoma virus, (Retroviridae), Wound tumor virus, (Reoviridae), WVU virus, (Reoviridae), WW virus, (Reoviridae), Wyeomyia virus, (Bunyaviridae), Xiburema virus, (Rhabdoviridae), Xingu virus, (Bunyaviridae), Y sarcoma virus, (Retroviridae), Yaba monkey tumor virus, (Poxviridae), Yaba- virus, (Bunyaviridae), Yaba- virus, (Bunyaviridae), Yacaaba virus, (Bunyaviridae), Yaounde virus, (Flaviviridae), Yaquina Head virus, (Reoviridae), Yata virus, (Rhabdoviridae), Yellow fever virus, (Flaviviridae), Yogue virus, (Bunyaviridae), Yokapox virus, (Poxviridae), Yokase virus, (Flaviviridae), Yucca bacilliform virus, (Badnavirus), Yug Bogdanovac virus, (Rhabdoviridae), Zaliv Terpeniya virus, (Bunyaviridae), Zea mays virus, (Rhabdoviridae), Zegla virus, (Bunyaviridae), Zika virus, (Flaviviridae), Zirqa virus, (Bunyaviridae).

Detailed description of the invention:

[0012] The composition of the present invention comprises at least 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol according to claim 1.

The composition of the present invention is used for blocking the above mentioned viruses entering the host cell(s).

The composition of the present invention is also used as a prophylactic.

The composition of the present invention can be used as virus inhibitor within and outside the animal or human body.

The compositions of the present invention can also be used as a disinfectant.

[0013] The composition of the present invention can be administered, orally, topically, by inhalation, by suppository, intravenously, subcutaneously or intramuscularly. The composition of the present invention can be manufactured in form of a solid (powder, tablets), or semi solid (creams, foams) or in form of a liquid or in form of a gas (aerosol).

5 **Working Combinations:**

[0014] The composition of the present invention must comprise at least 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol.

[0015] The composition of the present invention comprises at least 10% by weight of 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and at least 10% by weight of (2E)-3,7-dimethylocta-2,6-dien-1-ol.

[0016] A preferred composition of the present invention comprises at least 10% by weight of 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and at least 10% by weight of (2E)-3,7-dimethylocta-2,6-dien-1-ol and at least 10% by weight of (±)-2-Isopropenyl-5-methyl-4-hexen-1-ol.

However, an amount of 15% to 35% by weight for each component may be preferable.

[0017] Another preferred composition of the present invention comprises at least 10% by weight of 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and at least 10% by weight of (2E)-3,7-dimethylocta-2,6-dien-1-ol, and at least 10% by weight of (±)-2-Isopropenyl-5-methyl-4-hexen-1-ol and at least 10% by weight of 3,7-Dimethyl-1,6-octadien-3-yl acetate. However, an amount of 15% to 30% by weight for each component is preferable.

[0018] Using amounts less than 10% by weight of 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and less than 10% by weight of (2E)-3,7-dimethylocta-2,6-dien-1-ol may conduct to a less effective antiviral effect.

[0019] Using amounts less than 10% by weight of 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and less than 10% by weight of (2E)-3,7-dimethylocta-2,6-dien-1-ol and less than 10% by weight of (±)-2-Isopropenyl-5-methyl-4-hexen-1-ol may conduct to a less effective antiviral effect.

[0020] Because the chemical structure of each component is very similar, thousands of working combinations are possible. Following are some of the tested working combinations (see below examples) representing the most preferred embodiments of the present invention.

[0021] The common denominator for each composition of the below examples is 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol.

[0022] The following examples correspond to pharmaceutical compositions having an effective antiviral effect.

The compositions of the present invention may preferably contain 2, 3, 4, 5, 6, 7, 8, 9 components or even more components. The word component(s) can also be replaced by the word substance(s) or compound(s).

The compositions of the present invention comprising at least 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol are defined as being the following compositions:

35 **EXAMPLE 1**

1,2-dimethoxy-4-prop-2-enylbenzene
2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

45 **EXAMPLE 2**

3,7-Dimethyl-2,6-octadienal
2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

55 **EXAMPLE 3**

1,2-dimethoxy-4-prop-2-enylbenzene

bicyclo[5.3.0]decapentaene
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 4

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 5

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 1,7,7-Trimethyl-bicyclo[2.2.1]heptan-2-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 6

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 1,7,7-Trimethyl-bicyclo[2.2.1]heptan-2-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 7

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 3,7-Dimethyl-2,6-octadienal
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 8

(2E,6E)-3,7,11-trimethyldodeca-2,6,10-trien-1-ol
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol

R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 5 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 9

1,2-dimethoxy-4-prop-2-enylbenzene
 4,7,7-trimethyl-8-oxabicyclo[2.2.2]octane
 10 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 15 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 10

1,2-dimethoxy-4-prop-2-enylbenzene
 20 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 25 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 11

1,2-dimethoxy-4-prop-2-enylbenzene
 30 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 35 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 12

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 45 2-methylbutan-1-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 50

EXAMPLE 13

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 55 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate

1-methyl-4-propan-2-ylbenzene
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 14

3,7,11-trimethyldodeca-2,6,10-trienyl acetate
2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 15

1,2-dimethoxy-4-prop-2-enylbenzene
[(1R,2S,5R)-5-methyl-2-propan-2-ylcyclohexyl] acetate
1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 16

1,2-dimethoxy-4-prop-2-enylbenzene
2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
5-methyl-2-propan-2-ylcyclohexan-1-one
(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 17

1,2-dimethoxy-4-prop-2-enylbenzene
2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
(6E)-3,7,11-trimethyldodeca-1,6,10-trien-3-ol
R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 18

1,2-dimethoxy-4-prop-2-enylbenzene
2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
(4R)-1-methyl-4-prop-1-en-2-ylcyclohexene
(2E)-3,7-dimethylocta-2,6-dien-1-ol
3,7-Dimethyl-1,6-octadien-3-yl acetate
2-methoxy-4-prop-2-enylphenol
S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 19

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 20

1,4-dimethyl-7-propan-2-ylazulene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 21

1,2-dimethoxy-4-prop-2-enylbenzene
 2-methylbutan-1-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 22

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 [(1R,2S,5R)-5-methyl-2-propan-2-ylcyclohexyl] acetate
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 23

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 4-methyl-1-propan-2-yl-7-oxabicyclo[2.2.1]heptane
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 24

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane

(1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 2-methyl-2-prop-1-en-2-ylcyclohexan-1-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 25

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 5-methyl-2-prop-1-en-2-ylcyclohexan-1-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 26

(E)-4-(2,6,6-trimethylcyclohex-2-en-1-yl)but-3-en-2-one
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 27

1,2-dimethoxy-4-prop-2-enylbenzene
 5-methyl-2-propan-2-ylidenecyclohexan-1-one
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 28

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 3,7,11-trimethyldodeca-1,6,10-trien-3-ol
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 29

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 4-(4-methoxyphenyl)butan-2-one
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol

3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 30

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 2-methylbut-3-en-2-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 31

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 3-methyl-2-[(Z)-pent-2-enyl]cyclopent-2-en-1-one
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 32

3-methyl-2-[(Z)-pent-2-enyl]cyclopent-2-en-1-one
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 33

1,2-dimethoxy-4-prop-2-enylbenzene
 1-methyl-4-propan-2-ylcyclohexa-1,3-diene
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 34

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 (3S)-3,7-dimethyloct-6-en-1-ol
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 35

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 5 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 [(E)-3-phenylprop-2-enyl] acetate
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 10 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 36

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 15 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 20 3,7-dimethylocta-1,6-dien-3-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 37

(2R)-6-methyl-2-[(1R)-4-methyl-1-cyclohex-3-enyl]hept-5-en-2-ol
 25 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 30 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 38

1,2-dimethoxy-4-prop-2-enylbenzene
 2,7,7-trimethylbicyclo[3.1.1]heptan-3-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 40 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 39

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol

 4,7,7-trimethyl-8-oxabicyclo[2.2.2]octane
 50 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 55 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 40

1,2-dimethoxy-4-prop-2-enylbenzene

2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 2,6,6,8-Tetramethyltricyclo[5.3.1.0]undecan-8-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 41

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 1-methyl-4-propan-2-ylcyclohexa-1,4-diene
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 42

1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol

R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 43

1,2-dimethoxy-4-prop-2-enylbenzene
 3,7-dimethyloct-6-enyl acetate
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

(2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 44

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 2-methoxy-4-prop-2-enylphenol
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol

3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 45

1,2-dimethoxy-4-prop-2-enylbenzene

2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 5-pentyloxolan-2-one

(2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 46

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2,7,7-trimethylbicyclo[3.1.1]heptan-3-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 47

[2-methoxy-4-[(E)-prop-1-enyl]phenyl] acetate
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 48

R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 2-methoxy-4-prop-2-enylphenol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (6E)-3,7,11-trimethyldodeca-1,6,10-trien-3-ol

EXAMPLE 49

1,2-dimethoxy-4-prop-2-enylbenzene
 (5-methyl-2-propan-2-ylcyclohexyl) 2-hydroxybenzoate
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate

2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 50

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 (3S)-3,7-dimethyloct-6-en-1-ol

(2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 51

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (7,7-dimethyl-4-bicyclo[3.1.1]hept-3-enyl)methanol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 52

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 53

R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 2-methoxy-4-prop-2-enylphenol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (6E)-3,7,11-trimethyldodeca-1,6,10-trien-3-ol

EXAMPLE 54

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 4-propan-2-ylbenzaldehyde
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 55

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 (1R,SR)-4,7,7-trimethylbicyclo[3.1.1]hept-3-ene
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 56

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 5 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (3S)-3,7-dimethyloct-6-en-1-ol
 10 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 57

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 15 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 (1S,4R)-1,3,3-trimethylbicyclo[2.2.1]heptan-2-one

 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 20 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 58

R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 (6E)-3,7,11-trimethyldodeca-1,6,10-trien-3-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 30 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 59

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 35 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane

 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 40 3,7-Dimethyl-1,6-octadien-3-yl acetate
 3,7-dimethyloct-6-enyl acetate
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 60

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 50 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 4,7,7-trimethyl-8-oxabicyclo[2.2.2]octane
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 55

EXAMPLE 61

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol

1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 5 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (1S,2R,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 62

10 1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 15 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 4,7,7-trimethylbicyclo[3.1.1]hept-3-ene
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 63

20 1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 25 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol

3,7-Dimethyl-1,6-octadien-3-yl acetate
 1,7,7-trimethylbicyclo[2.2.1]heptan-6-ol
 30 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 64

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 35 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 40 (1S,5S)-7,7-dimethyl-4-methylidenebicyclo[3.1.1]heptane
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 65

1,2-dimethoxy-4-prop-2-enylbenzene
 45 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 50 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 66

55 1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol

R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 4,12,12-trimethyl-9-methylene-5-oxatricyclo[8.2.0.0]4,6]]dodecane
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 67

2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 (±)-2-Isopropenyl-5-methyl-4-hexen-1-ol

EXAMPLE 68

2-methoxy-4-[(E)-prop-1-enyl]phenol
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 69

1,2-dimethoxy-4-prop-2-enylbenzene
 5-pentyloxolan-2-one
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 70

1,2-dimethoxy-4-prop-2-enylbenzene
 5-pentyloxolan-2-one
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 71

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 (1S,2S,5R)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 72

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol

1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 2-methoxy-4-prop-2-enylphenol
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 73

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (4R)-1-methyl-4-prop-1-en-2-ylcyclohexene
 S-(+)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone

EXAMPLE 74

2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol.

EXAMPLE 75

2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 (2E)-3,7-dimethylocta-2,6-dien-1-ol
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 (\pm)-2-Isopropenyl-5-methyl-4-hexen-1-ol

[0023] Each component of the above mentioned examples can have a weight percentage (wt %) comprised between 0.05 and 80, or preferably between 5 to 50 or between 10 to 50 or between 10 to 35, more preferably between 0.05 and 35, most preferably between 5 and 35.

[0024] Each component contained in a composition of the above mentioned examples may contain the same or different ranges (in wt %) chosen among the previously mentioned ranges (in wt%). One or more component(s) contained in a composition of the above mentioned examples may also have different ranges (in wt %) as those previously mentioned.

[0025] Any specific component of any above mentioned example can be combined with any other specific component of any other example mentioned above in order to form a new composition.

[0026] 3,7-Dimethyl-1,6-octadien-3-yl acetate can be replaced by other catalysers (components) depending on the type of application.

[0027] Any component of the composition of the present invention can be isomer positive and/or isomer negative.

[0028] In the improbable case that one or more of the above mentioned example(s) would have been known from a prior art document, we reserve the right to disclaim such example from the present invention.

[0029] An example of a composition of the present invention comprises the following component(s) in the following ranges (wt%):

Table 1

Components of a preferred embodiment of the composition (example 75)	Range 1 in wt. %	More preferred Range 2 in wt. %	Most preferred Range 3 in wt. %
2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone	0.05 to 80	10 to 50	10 to 35
(2E)-3,7-dimethylocta-2,6-dien-1-ol	0.05 to 80	10 to 50	10 to 35
3,7-Dimethyl-1,6-octadien-3-yl acetate	0 to 20	0.05 to 10	1 to 10

(continued)

Components of a preferred embodiment of the composition (example 75)	Range 1 in wt. %	More preferred Range 2 in wt. %	Most preferred Range 3 in wt. %
(±)-2-Isopropenyl-5-methyl-4-hexen-1-ol	0.05 to 80	10 to 50	10 to 35

[0030] All values (i.e. any limit value of a range) mentioned on a same line in the above table can be combined together in order to form a new range combination for the specific component comprised in the composition.

[0031] The aim of table 1 is to give examples of ranges and specific values found for a specific component by techniques well known by a person skilled in the art.

Advantage of the present invention:

[0032] An advantage of the antiviral compositions according to the present invention consists in that the composition is a mixture of components and so no simultaneous resistance can be developed to them all by the viruses. Moreover, the non-specific activity of the composition according to the invention is different to that of conventional drugs, enabling them to effectively treat and prevent diseases and not to be affected by the possible emergence of virus mutation.

[0033] Another advantage of the compositions according to the invention is that the components are lipophilic, being therefore able to easily cross between body and cellular compartments and accumulate in lipid-rich tissues.

[0034] Being volatile, the components of the compositions according to the invention can be excreted via the lungs: an added advantage when treating and preventing respiratory infections or inflammations. The components of the composition can be diffused into the atmosphere and fall onto exposed surface, deactivating viruses before they reach a potential host.

[0035] In order to prove the efficacy of the composition of the present invention, in vivo and in vitro studies have been conducted. Following are examples of at least one virus belonging to each of the 4 major viral families.

IN VIVO TESTS:

[0036]

Individual case studies were performed by medical practitioners that confirmed the potent activity of the present invention against all existing 4 families of viruses, namely:

- DNA enveloped viruses (e.g. Herpes virus, Molluscum contagiosum, Varicella-zoster).
- DNA non-enveloped viruses (e.g. Papillomavirus, Parvovirus, Adenovirus).
- RNA enveloped viruses (e.g. Hepatitis C, Porcine reproductive and respiratory syndrome virus, Coronavirus).
- RNA non-enveloped viruses (e.g. Rotavirus, Rhinovirus, Coxsackievirus).

[0037] Studies conducted by veterinarians involving over 700 animals, several observational studies on humans and ongoing double-blinded placebo controlled phase III clinical trials confirmed the efficiency of the present invention and did not show any toxic side effect.

MODE OF ACTION

[0038] The composition of the present invention deactivates viruses when they are in the free state, i.e. when they are not associated with cells, by interfering with the surface tension of the lipid coating of the viruses capsules thereby preventing the entry of the viruses in the animal or human cells and therefore the multiplication of the viruses in the cells. This had been determined by in vitro technology. This is in direct contrast to existing antiviral products, which only exert an effect once the viruses are associated with host cells. The composition of the present invention can act as an anti-infectious agent, inactivating viral particles before they contact the host. There is only one common mode of action of the composition of the present invention involved in all diseases; therefore there is no need to provide tests for all diseases or all viruses specifically mentioned in the present application.

IN VIVO RESULTS:

[0039] The following examples have been taken from cases study results to highlight the activity of the antiviral composition.

RNA enveloped virus - HEPATITIS C VIRUS:

[0040] In most instances, there is a slow, progressive asymptomatic hepatitis with persistent viraemia lasting many years. Only 5% of those infected show symptoms. Chronic infection occurs in 80% of those infected, showing a variety of debilitating conditions including kidney disease and 20% develop cirrhosis and hepatocellular carcinoma. Infection is caused by direct contact with contaminated blood and mother to infant transfer in commonplace.

[0041] The drug of choice is with IFN-alpha, but many cases relapse when the drug is stopped and less than 15% are permanently cured after more than a year of treatment.

METHODS:**Patients:**

[0042] Adult patients who had not previously taken interferon and who had the following characteristics were eligible for the study: a positive test for anti-HCV antibody, an HCV RNA level greater than 2000 copies per milliliter on polymerase-chain-reaction analysis, a serum alanine aminotransferase concentration above the upper limit of normal on two occasions during the preceding six months, and findings consistent with a diagnosis of chronic hepatitis C on liver biopsy performed during the preceding year, as determined by a single, study-designated pathologist.

Assessment and endpoints:

[0043] Because of the specific mode of action of the composition, which is genotype neutral, no Hepatitis C virus genotyping was performed. The primary efficacy end points were an early virologic response (significant lowering of HCV RNA on analysis).

RESULTS:**Characteristics of the patients:**

[0044] Of the 11 patients enrolled, 6 met the criteria for entry. Base loads ranged from 22,000,000 to 11,600. Five (5) patients were enrolled for a one-time 1 to 4 week treatment. One patient was enrolled for a long-term treatment.

Efficacy: 1 - 4 weeks

[0045] All 6 patients were administered 350 µg of the composition of the present invention three times daily.

Table 2: Virological and Biological Response at Week 4 according to Intention-to-Treat Analysis									
P	Name	Date	Base	LO	Date	Base +1	Log	EVR	Log
1	Sherif	5/01/2007	22.000.000	7,3	17/01/2007	1.360.000	6,1	94%	1,2
3	Adel	26/01/2007	290.000	5,5	10/02/2007	54.020	4,7	81%	0,7
7	Fawzy	17/02/2007	1.118.572	6,0	11/03/2007	111.144	5,0	90%	1,0
8	Fathy	18/02/2007	1.950.00	6,3	13/03/2007	165.055	5,2	92%	1,1
11	Magded	17/01/2007	11.600	4,1	04/03/2007	1.864	3,3	84%	0,8
2	Fatma	17/01/2007	825.000	5,9	27/01/2007	501.000	5,7	39%	0,2

[0046] Efficacy of treatment with the composition was associated with a significant drop in viral load comparable with traditional treatment with peginterferon alfa-2a.

Efficacy: Interrupted trial:

[0047] One patient was treated over a period of 30 weeks, during which the treatment was interrupted and restarted three times within three different intervals. He was administered the same dose, 350 µg of the composition three times daily for intervals ranging from 1 to 4 weeks.

Table 3: Virological and Biological Response with variable interruptions Intention-to-Treat Analysis							
	Test	Date	Viral Load	LOG	WKs	LOG	Start / Stop
1	Base	05/01/2007	22.000.000	7,3			
2	PCR 01	17/01/2007	1.360.000	6,1	2	-1,2	
3	PCR 02	24/01/2007	453.000	5,7	1	-0,5	Interruption of treatment
4	PCR 03	01/02/2007	5.658.000	6,8	1	1,1	Restart of treatment
5	PCR 04	17/02/2007	1.118.572	6,0	2	-0,7	
6	PCR 05	12/03/2007	165.055	5,2	3	-0,8	Interruption of treatment
7	PCR 06	01/07/2007	4.498.635	6,7	10	1,4	Restart of treatment
8	PCR 07	28/08/2007	1.150.008	6,1	4	-0,6	

CONCLUSION

[0048] Multiple interruptions of the treatment with the composition did not affect its positive virological response, confirming its mode of action.

DNA non-enveloped virus - PAPILLOMA VIRUS:

[0049] A papilloma is a benign epithelial growth commonly referred to as a wart or verruca and is caused by over 40 different strains of Human Papillomavirus (HPV). The appearance and seriousness of the infection varies from one anatomical region to another. Genital warts is now considered to be the most common sexually transmitted disease in the USA, with over 6 million new cases a year and with over 30 million carriers in the USA alone. There is a strong association with HPV infection and cancer of the reproductive tract.

TEST RESULTS

[0050] The efficacy of the composition of the present invention on the Papilloma virus was performed on a stressed businessman, aged 34, who regularly endured outbreaks of genital viral warts due to the papilloma virus. This tended to occur once every two weeks. The composition was administered orally under the medical supervision of a doctor, 300 mg thrice daily for three days at the onset of an outbreak and the symptoms subsided. After 3 weeks all warts had disappeared. The patient reported no side effects and remains asymptomatic after 18 months.

ONGOING RANDOMIZED PLACEBO-CONTROLLED CLINICAL TRIAL

[0051] A ongoing randomized, double-blind, placebo controlled trial at an Mexican Hospital is being conducted to compare the effectiveness and the patient tolerance of the composition of the present invention topically applied spray with those of a placebo spray in the treatment of viral induced cervical lesions. The results of this initial part of the study will also help to determine changes the treatment protocols, changes in recruitment, enrollment, and follow-up for the rest of the study. All subjects had cervical lesions, as confirmed by colposcopy examination. In the initial group 28 subjects were screened; 24 were confirmed positive. Sixteen were eliminated; four had cervical atrophy and 12 were excluded from the efficacy analysis for protocol violations. There were 10 subjects in the intent-to-treat analysis, and a separate efficacy analysis was done on four subjects. In total each subject was treated eight times in a period of four days. There was no difference between the two groups at baseline with respect to any clinical or demographic factor. Neither group experienced adverse effects. More than 65% of the lesions in the group treated with the composition of the present invention started to disappear after 1 day and nearly all lesions disappeared after 7 days, as compared to no disappearance of lesions in the placebo group. All subjects treated with the composition of the present invention showed complete deactivation of the viral infection versus no de-activation in the placebo group during the follow-up

period. The safety record of the drug was satisfactory; there was no difference between the composition of the present invention and the placebo in side effects or pain. Topically applied the composition of the present invention is effective in the treatment of viral induced cervical lesions.

DNA enveloped virus - HERPES SIMPLEX VIRUS TYPES 1 & 2

[0052] Virus types 1 and 2 are generally responsible for upper body (oropharyngeal, dermal, ophthalmic) and genital infections respectively. Skin and mucous membranes are entry points in which the virus multiplies and causes painful vesicles; infection is caused by direct contact with infected secretions. The viruses lie dormant in nerve tissue and reactivation may occur, triggered by a variety of events such as colds, menstruation, etc. The majority of the adult population is infected, with an estimated 1 million new cases of sexually transmitted disease every year in the USA alone.

TEST RESULTS

HERPES SIMPLEX VIRUS TYPE 1 - CASE EXAMPLE

[0053] Several subjects with irregular, recurrent herpes infections of the lips were treated with oral application of the composition at the onset of an outbreak. The characteristic vesicles disappeared quickly and all patients have remained asymptomatic with no further treatment required.

HERPES SIMPLEX VIRUS TYPE 2 - CASE EXAMPLE

[0054] The efficacy of the composition on the Herpes simplex 2 virus was performed on female subject who suffered recurrent instances of genital herpes at the beginning of every menstrual cycle for 10 years. Existing treatment consisted of Zovirax 7-10 days on a monthly basis, which had proved to be ineffective. The composition was administered orally under medical supervision, 300 mg thrice daily for three days, commencing 24 hours before the expected onset of the next outbreak. This outbreak was prevented. Although the composition of the present invention was not administered the following month, no symptoms appeared and the subject has remained herpes-free for over 18 months.

RNA enveloped virus- PRRS VIRUS (Porcine Reproductive and Respiratory Syndrome)

[0055] PRRS is a major cause of disease in pigs; it is present in virtually all pig herds with 100% of adults being sero-positive. The disease is characterized by abortion and stillbirths in adults and respiratory disease, diarrhoea and poor growth characteristics in piglets. There is no conventional cure and treatment consists of managing secondary bacterial infections with antibiotics.

TEST RESULTS

[0056] The efficacy of the composition was tested at a pig breeding centre. The infection of the piglets with PRRS was confirmed by standard tests and observation of symptoms. Two hundred piglets were orally administered the composition 500mg twice daily for 4 consecutive days and the results compared to non-treated control groups. The results are shown in Table 4.

Table 4. The results of PRRS infected piglets treated with the composition versus to control groups

PPRS infected piglets							
Treated with the Composition ⁽¹⁾				Control Group Untreated			
Group	Piglets	Virus	Death	Group	Piglets	Virus	Deaths
1	50	50	1	5	50	0	5
2	50	50	1	6	50	0	3
3 ⁽²⁾	50	50	0	7	50	0	4
4 ⁽²⁾	50	50	0	8	50	0	5
Total	200	200	2		200	0	17

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(continued)

PPRS infected piglets							
Treated with the Composition ⁽¹⁾				Control Group Untreated			
Group	Piglets	Virus	Death	Group	Piglets	Virus	Deaths
			1%				8.5%
⁽¹⁾ composition administered 1 to 2 days after birth ⁽²⁾ composition administered immediately at birth ⁽³⁾ After 4 days							

[0057] Laboratory analysis demonstrated that the piglets in the test group were PPRS-free after 4 days whereas the control animals were still infected. The results showed that the death rate was reduced from 8.5% to 1% by the administration of the composition and it was noted that the treated piglets had improved appetite and growth rates as compared to the controls.

DNA non-enveloped virus - CANINE PARVOVIRUS

[0058] Parvovirus is a highly contagious disease and major killer of puppies. It is characterized by bloody diarrhoea and progresses rapidly, with death occurring often within 2 days. It is transmitted via infected faeces. There is no conventional cure and treatment is limited to supportive therapy such as intravenous electrolytes. Infected adult dogs often show no symptoms and high levels of maternal parvovirus antibodies in the puppies' bloodstream interfere with vaccination, rendering it ineffective for the first 2-3 weeks.

TEST RESULTS

[0059] Recurrent Parvovirus outbreaks at a Belgian kennel had resulted in a death rate of over 90%. Puppies developed symptoms of the disease 10-14 days after birth and the presence of Parvovirus was determined by laboratory tests conducted by Klinische Laboratorium Herentals. The efficacy of the composition on this virus was supervised by two doctors who coordinated the treatment, which consisted of the oral administration of the composition, 500mg twice daily for 7 days. A Veterinarian followed up the treatment. Due to the commercial nature of the kennels, a control group could not be instigated. 1 to 3 days after the beginning of treatment the symptoms had disappeared in the majority of puppies. After 7 days the puppies were tested and found to be virus-free. The results are shown in Table 5.

Table 5. The composition treatment of puppies infected with Parvovirus

Bitch	Puppies	Sick	Very Sick	Dying	Cured	Death
Beagle 1	6	2	2	1	5	1
Dalmatian	6	3	2	1	5	1
Golden Retriever 1	7	0	7	0	7	0
Border Collie 1	7	0	7	0	7	0
Berner Senner	3	3	0	0	3	0
Ruw H. Teckel	6	6	0	0	6	0
Malterzer	5	5	0	0	5	0
Golden Retriever 2	5	4	1	0	4	1
Golden Retriever 3	7	6	1	0	6	1
Labrador 2	8	8	0	0	8	0
Border Collie 2	7	6	1	0	6	1
Malterzer 2	3	3	0	0	3	0
Bobtail	2	2	0	0	2	0
Labrador 3	4	4	0	0	4	0

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(continued)

Bitch	Puppies	Sick	Very Sick	Dying	Cured	Death
Beagle 2	7	0	7	0	7	0
Labrador 4	2	0	2	0	2	0
Siberian Huski	8	8	0	0	8	0
Golden Retriever 4	5	4	1	0	4	1
Golden Retriever 5	7	7	0	0	7	0
Golden Retriever 6	11	11	0	0	11	0
	116	82	31	2	110	6
					95%	5%

[0060] Treatment of the puppies with the composition reduced the death rate from over 90% to 5%.

DNA enveloped virus - CANINE HERPES VIRUS

[0061] Canine Herpes Virus is a leading cause of puppy deaths. It lives in the respiratory and reproductive tracts of adult dogs, which show no symptoms. It is transferred to puppies during birth and via airborne nasal secretions once born. It is very contagious and spreads rapidly through litters, causing liver damage, haemorrhages, blindness and staggering. Death occurs within 24-48 hours. There is no conventional cure and treatment is aimed at supportive care. Vaccination does not exist.

TEST RESULTS

[0062] There was a high infection rate of canine Herpes virus in a breeding kennel, with over 40% of the puppies suffering from this deadly disease. In order to test the efficacy of the composition on its potential to eliminate future infections, the bitches were administered the composition before delivery of the puppies, since this disease is passed from symptom-free mother to their offspring. Approximately one week before giving birth, the mothers were orally administered the composition 500mg twice daily for 7 days. See table 6.

Table 6: herpes infection rates in puppies from mothers pretreated with the composition Unlike conventional anti-virals, the composition is non toxic and an effective treatment can be achieved in days rather than in weeks or months.

Bitch	Puppies	Birth date	Herpes free
Chow-chow	4	13/feb	4
Border collie	8	15/feb	8
Chi-Tzu	4	15/feb	4
Jack-russel	4	17/feb	4
Golden retriever	6	21/feb	6
Snauzer	10	22/feb	10
Total	36		36 (100%)

RNA non-enveloped virus - ROTAVIRUS

[0063] The Rotaviruses are the most common cause of diarrhoea in young animals, causing a 20% death rate 7-10 days after birth. The disease is often complicated by a secondary infection with *Escherichia coli*. These viruses are also associated with a wide range of similar infections in humans, especially infants.

TEST RESULTS

[0064] A pig breeding centre in Belgium experienced an epidemic of rotavirus and over 500 piglets demonstrated

severe diarrhoeal symptoms. It was expected that more than 25% would die within a week since there was no effective treatment. All of the animals were administered the composition and after 3 days, 95% of the piglets were devoid of symptoms and free of the virus.

TESTS RESULTS CONCLUSIONS:

[0065] Independently of the fact that the treated viruses belonged to the RNA, DNA, enveloped or non-enveloped groups, the composition of the present invention interferes with the existing or acquired lipid envelope covering the virus and not with the virus per se; all studies indicate that the composition is capable of de-activating every type of virus in a free state.

ADMINISTERING OF COMPOSITION:

[0066] The best mode administering the composition is one drop or + 0.05ml per 10 kg body weight (not including excess body fat), three times daily orally. The man skilled in the art can adapt the recommended dose per kg to the average weight of a human (50 kg). Preferably encapsulated but can be taken orally mixed with fruit juice or yoghurt, topically mixing with macadamia-type oil for fast skin absorption and petroleum jelly for slow topical absorption. For administering to animals composition can be mixed with the feed. Aerosol or topical application according to standard aerosol dispersions methods. Rectal or vaginal insertion of suppository with indicated dose according to standard suppository administration methods.

Process of manufacture and galenics:

[0067] All components are manufactured and available from a specialized open market. The purity of the components preferably has to be $\geq 99\%$ and this is verified before the formulation process by gas chromatography/mass spectrometry. Preferably the components have to be pre-blended, in equal or different parts, using a sterile blending device. The preferred temperature of manufacturing and storage of the composition is between 5 and 15 degrees Celcius. After the pre-blending process the mixture can be added to a pharmaceutically acceptable carrier. Depending on the type of application, the ratio between the composition of the present invention and the pharmaceutically acceptable carrier can range from 5% to 90%, where 50% is the most common ratio used for practical medical applications. The mixture can then be further processed and integrated in capsules, gels, gelules, sprays, aerosols, suppositories or other drug delivery vehicles.

[0068] The method for manufacturing the compositions of the present invention comprises the following steps:

- pre-blending the components of the present invention at a temperature comprised preferably between 5 and 15 °C,
- obtention of a mixture,
- addition of the mixture to a diluent (a pharmaceutically acceptable carrier).

[0069] The presence of a pharmaceutically acceptable carrier is optional and depending on the type of drug delivery vehicle

[0070] The person skilled in the art knows how to manufacture the compositions of the present invention.

Claims

1. **Composition** comprising at least the following components:

2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and
(2E)-3,7-dimethylocta-2,6-dien-1-ol.

2. Composition according to claim 1, further comprising:

(\pm)-2-Isopropenyl-5-methyl-4-hexen-1-ol

3. Composition according to claim 1, further comprising:

(\pm)-2-Isopropenyl-5-methyl-4-hexen-1-ol and
3,7-Dimethyl-1,6-octadien-3-yl acetate

4. Composition according to claims 1 to 3 comprising at least 10% by weight of each component.
5. Composition according to claims 1 to 3, wherein each component is isomer positive and/or isomer negative.

6. Composition according to claim 1 further comprising:

1,2-dimethoxy-4-prop-2-enylbenzene
 2-(5-ethenyl-5-methyloxolan-2-yl)propan-2-ol
 1-methyl-4-prop-1-en-2-yl-7-oxabicyclo[4.1.0]heptane
 (1R,2S,5S)-5-methyl-2-propan-2-ylcyclohexan-1-ol
 R-(-)-2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone
 3,7-Dimethyl-1,6-octadien-3-yl acetate
 2-methoxy-4-prop-2-enylphenol

7. Composition according to claim 6 comprising 0,05 to 80% by weight of each component.
8. Composition comprising at least 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol in a pharmaceutically effective weight percentage for use as a medicament.

9. Composition as defined in claims 2 to 7 for use as a medicament.

10. **Composition** comprising at least 2-methyl-5-(prop-1-en-2-yl)-cyclohex-2-enone and (2E)-3,7-dimethylocta-2,6-dien-1-ol in a pharmaceutically effective concentration for use in treatment and prevention of diseases caused by DNA enveloped viruses, DNA non-enveloped viruses, RNA enveloped viruses, RNA non-enveloped viruses.

11. Composition as defined in claims 2 to 7 for use in treatment and prevention of diseases caused by DNA enveloped viruses, DNA non-enveloped viruses, RNA enveloped viruses, RNA non-enveloped viruses.

12. Composition as defined in claims 10 and 11 for use in treatment and prevention of a disease selected from the group consisting in:

(broncho)-pneumonia, 3 day fever exanthema, acute and chronic hepatitis, acute fever, acute gastroenteritis caused by strains such as Desert Shield Lordsdale Mexico Norwalk Hawaii Snow Mountain Southampton virus, acute gastroenteritis caused by strains such as Houston/86 Houston/90 London 29845 Manchester Parkville Sapporo virus, acute hepatitis, acute respiratory distress syndrome, AIDS, anogenital mucosa, Argentine hemorrhagic fever, arthralgia, avian flu, Bolivian hemorrhagic fever, Brazilian hemorrhagic fever, chickenpox, chronic hepatitis, coma, common cold infection, common cold symptoms, congenital infection, conjunctivitis, contagious ecthyma, contagious pustular dermatitis, cornea, Creutzfeldt-Jakob-Disease, cryptic enteric infection, cytomegaloviral mononucleosis, dengue hemorrhagic fever (DHF), dengue shock syndrome (DSS), diarrhea, eczema, eczema herpeticum, encephalitis, encephalopathy, enteritis, epidemic nephropathy, epidemic polyarthritis and exanthema, epidermodyspasia veruciformis, Epstein-Barr virus infection, exanthema, exanthema in children, Fatal familial insomnia, febrile encephalitis, febrile illness, fever, formerly Human echovirus 22 23, gastroenteritis, gastrointestinal infections intracytoplasmic inclusion bodies, genital tract infections, haemolytic crisis in people with sickle cell disease, headaches, hemorrhagic fever, hemorrhagic fever w renal syndrome, herpetic encephalitis, Hodgkin's disease, Human coxsackievirus, Human coxsackievirus B1-6, Human echovirus 1-7 9 11-21 24-27 29-33, Human enterovirus 69, Human enterovirus 71 (hand foot and mouth disease), Human hepatitis virus A (HHAV), Human poliovirus, Human rhinovirus 1 2 7 9 11 15 16 21 29 36 39 49 50 58 62 65 85 89 hyperacute respiratory disease, Human rhinovirus 3 14 72, hyperacute respiratory disease, immune deficiency syndrome, infantile diarrhea, Infection with any dengue serotype (1-4), infectious mononucleosis, joint pain, Kaposi's sarcoma, keratoconjunctivitis, Kuru, lesions of cutaneous sites, leucopenia, liver cirrhosis, lower respiratory tract infection, lymphadenopathy, maculopapular rash, malignant tissue, measles, meningitis, mononucleosis (kissing disease), mumps, muscle pains, myocarditis, nephropathy, nephropathy in transplant patients, numbness, old world, opportunistic infection, oral infections, oral mucosa, orchitis, pancreatitis, pandemics, papilloma, paralysis, persistent infection of the kidney, persistent infections, persistent lymphopathy, pharyngeal conjunctivitis, pneumonia, primary hepatocellular carcinoma, Prions, pulmonary syndrome, rabies, rash, recurrent epidemics of respiratory disease, respiratory disease, respiratory illness, Roseola infantum, sarcoma, scarring, severe chills arthralgia, severe acute respiratory syndrome, severe encephalitis, shingles, sixth disease, skin and mucous membrane lesions, slim disease, sore throat, subacute sclerosing

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panencephalitis, subitum, superinfection with Deltavirus, ulceration, upper respiratory tract illness, Venezuelan hemorrhagic fever, vesicular pharyngitis, vesicular stomatitis with exanthema, viral polyarthritis and rash, viral warts, watery diarrhea, weakness, zoonotic, zoster, metaplasia, dysplasia, anaplasia, desmoplasia, carcinoma in situ, flu (influenza), invasive carcinoma.

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13. Use of the composition as defined in claims 1 to 12 as a prophylactic.

14. Use of the composition as defined in claims 1 to 12 as a disinfectant.

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15. Use of the composition as defined in claims 1 to 12 as a viral inhibitor within or outside the body.

16. Composition as defined in claims 8 to 12 being administered, orally, topically, by inhalation, by suppository, intravenously, subcutaneously or intramuscularly.

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17. Method for manufacturing the compositions as defined in claims 1 to 12 comprising the following steps :

- pre-blending the components at a temperature comprised between 5°C and 15 °C,
- obtention of a mixture
- addition of the mixture to a pharmaceutically acceptable carrier.

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EUROPEAN SEARCH REPORT

Application Number
EP 10 15 7930

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Place of search Munich		Date of completion of the search 23 April 2010	Examiner Dahse, Thomas
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

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EUROPEAN SEARCH REPORT

 Application Number
EP 10 15 7930

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