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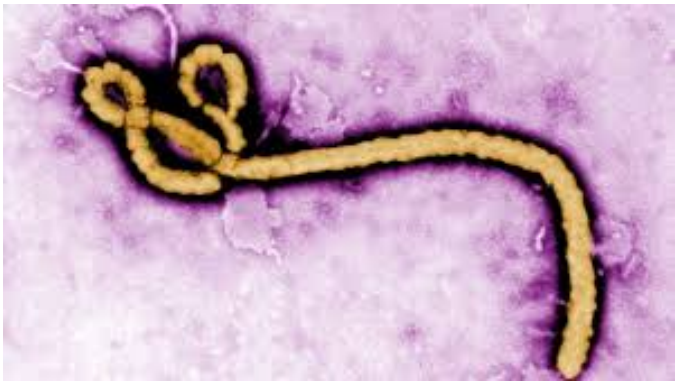
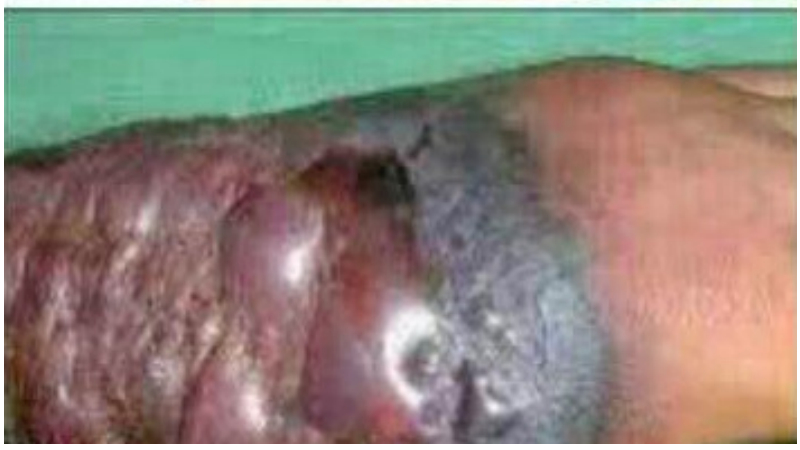
Ebola (Filovirus) & Related Diseases (Marburg Virus, Lassa Fever, Hemorrhagic Fever, &c) : Patents & Applications

Got Ebola ? (Got Tetrasilver Tetroxide ?)





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http://espacenet.com

COMPOSITIONS AND METHODS FOR INHIBITING EXPRESSION OF A GENE FROM THE EBOLA
US8735369

The invention relates to a double-stranded ribonucleic acid (dsRNA) for inhibiting the expression of a gene from the Ebola virus.

INHIBITORS OF PROTEIN PHOSPHATASE-1 AND USES THEREOF
WO2014028051

Inhibitors of protein phosphatase-1 (PP-1) and their use in a method for the treatment or prevention of viral infections caused by HIV or ebola virus are disclosed. Inhibitors of protein phosphatase-l in effective amounts have been shown to slow down viral replication upon contacting ebola virus or cells containing the ebola virus.

EBOLA VIRUS LIPOSOME VACCINE
WO2012050193

The present invention provides a peptide-bonded liposome that is a liposome to which a peptide is bonded, the peptide being an ebola virus antigen peptide that can induce cytolytic T lymphocytes restricted to HLA-A*0201 or HLA-A*2402, the liposome containing a liposome stabilization agent and a phospholipid having a acyl group having 14-24 carbon atoms and one unsaturated bond or a hydrocarbon group having 14-24 carbon atoms and one unsaturated bond, and the peptide being bonded to the surface of the liposome. Also, the present invention provides an ebola virus antigen peptide that can induce cytolytic T lymphocytes restricted to HLA-A*0201 or HLA-A*2402. The peptide-bonded liposome and the peptide are useful as an ebola virus vaccine or a cytolytic T lymphocyte activation agent.

Filovirus fusion proteins and their uses
US2013323243

Also published as: CN103596587 // WO2012154203 // US2013323243

This invention provides fusion proteins comprising a Filovirus glycoprotein segment and an immunoglobulin polypeptide segment. The fusion proteins are useful in immunogenic

compositions to protect against infections by Filoviruses, such as Ebola virus, in both humans and non-human animals. The fusion proteins are also useful in diagnostic assays to detect Filovirus infections.

ANTISENSE ANTIVIRAL COMPOUNDS AND METHODS FOR TREATING A FILOVIRUS INFECTION
US8703735

Also published as: US8198429 // US8524684

The present invention provides antisense antiviral compounds, compositions, and methods of their use and production, mainly for inhibiting the replication of viruses of the Filoviridae family, including Ebola and Marburg viruses. The compounds, compositions, and methods also relate to the treatment of viral infections in mammals including primates by Ebola and Marburg viruses. The antisense antiviral compounds include phosphorodiamidate morpholino oligonucleotides (PMOplus) having a nuclease resistant backbone, about 15-40 nucleotide bases, at least two but typically no more than half piperazine-containing intersubunit linkages, and a targeting sequence that is targeted against the AUG start site region of Ebola virus VP35, Ebola virus VP24, Marburg virus VP24, or Marburg virus NP, including combinations and mixtures thereof.

BROAD SPECTRUM INHIBITORS OF THE POST PROLINE CLEAVING ENZYMES FOR TREATMENT OF HEPATITIS C VIRUS INFECTIONS
WO2014022636

Disclosed are methods of treating, inhibiting, or preventing a viral infection in a mammal in need thereof by administering a therapeutically or prophylactically effective amount of an inhibitor of FAP, an inhibitor of DPPIV, an inhibitor of DPP8, or an inhibitor of DPP9. The inhibitor may act as both an inhibitor of DPPIV and an inhibitor of DPP8/9. The viral infection includes, but is not limited to, hepatitis B virus, hepatitis C virus, human immunodeficiency virus, Polio virus, Coxsackie A virus, Coxsackie B virus, Rhino virus, respiratory syncytial virus, dengue virus, equine infectious anemia virus, Echo virus, small pox virus, Ebola virus, and West Nile virus.

COMPOSITIONS AND METHODS FOR TREATMENT OF FILOVIRUS-MEDIATED DISEASES
US8475804

The invention features compositions, methods, and kits useful for the treatment of filovirus-mediated diseases, e.g., hemorrhagic fever caused by Ebola virus, in an animal.

HOST TARGETED INHIBITORS OF DENGUE VIRUS AND OTHER VIRUSES

WO2013154778

Novel antiviral compounds of Formulae (I)-(III) are provided: (I) (II) (III) The inventive compounds, pharmaceutical compositions thereof, and kits including the inventive compounds are useful for the prevention and treatment of infectious diseases caused by viruses, for example, by Flaviviridae virus (e.g., Dengue virus (DENY)), Kunjin virus, Japanese encephalitis virus, vesicular stomatitis virus (VSV), herpes simplex virus 1 (HSV-1), human cytomegalovirus (HCMV), poliovirus, Junin virus, Ebola virus, Marburg virus (MARV), Lassa fever virus (LASV), Venezuelan equine encephalitis virus (VEEV), or Rift Valley Fever virus (RVFV).

SULFONYL SEMICARBAZIDES, SEMICARBAZIDES AND UREAS, PHARMACEUTICAL COMPOSITIONS THEREOF, AND METHODS FOR TREATING HEMORRHAGIC FEVER VIRUSES, INCLUDING INFECTIONS ASSOCIATED WITH ARENA VIRUSES
US8664274

Also published as: WO2008147474

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel sulfonyl semicarbazides, carbonyl semicarbazides, semicarbazides, ureas and related compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to, Arenaviridae (Junin, Machupo, Guanarito, Sabia, Lassa, Tacaribe, Pinchinde, and VSV), Filoviridae (ebola and Marburg viruses), Flaviviridae (yellow fever, omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever).

SMALL MOLECULE INHIBITORS OF EBOLA AND LASSA FEVER VIRUSES AND METHODS OF USE
US2013231332

Also published as: WO2012031090

The present invention relates to compositions and methods for the treatment of infection by enveloped viruses, such as Ebola and Lassa fever viruses.

SET OF OLIGONUCLEOTIDE PRIMERS AND FLUORESCENT-MARKED PROBES FOR TYPE-SPECIFIC EXPRESS IDENTIFICATION OF EBOLA-ZAIRE VIRUS BY METHOD OF POLYMERASE CHAIN REACTION
RU2487942

FIELD: biotechnologies.SUBSTANCE: invention relates to a set of oligonucleotide primers and fluorescent-marked probes for type-specific express-identification of the Ebola-Zaire virus by the method of polymerase chain reaction in real time. The set includes sequences that are type-specific for the Ebola-Zaire virus: external: 5'?' 5' CCACTTTTCTCAACCAAAATTATTAGTGA 3' 3'?5' 5'TTCTCTAAATCAGTTACAAARCTACTCCC 3' internal: 5'?3' 5'TGGGATCCAGTHTIYGARCC 3' 3'?5' 5' ACTACCATCATATTGCTAGGAAATGCTT 3' probe: FAM - TACTACCACAATATCGGAACTTTTCTTTCTCATTGAA - BHQ1.EFFECT: invention may be used in medicine for quick detection of genetic material of Ebola-Zaire virus.

SET OF OLIGONUCLEOTIDE PRIMERS AND FLUORESCENT-LABELED PROBES FOR SPECIES-SPECIFIC EXPRESS-IDENTIFICATION OF VIRUS EBOLA-SUDAN BY METHOD OF POLYMERASE CHAIN REACTION
RU2487167

FIELD: biotechnology.SUBSTANCE: invention relates to the field of biotechnology and is related to the set oligonucleotide primers and fluorescent-labeled probes for species-specific express-identification the virus Ebola-Sudan by the method of polymerase chain reaction in real time. The set comprises sequences species-specific for the virus Ebola-Sudan: external: 5'?3' 5' CCGTTATTCTCYACRAAGRTSATTAGTGA 3' 3'?5' 5' TTCTCTAGGTCTGTGACAAAACTACTCCC 3' internal: 5'?3' 5' TGGGATGCAGTHTTYGARCC 3' 3'?5' 5' ACAACCATCATRTTGCTTGGAAAGGCTT 3' probe: FAM - TATTGCCCCAGAATCGAAATTTTTCTTTTTCATTGAA-BHQ1.EFFECT: invention can be used in medicine for rapid identification of the genetic material of the virus Ebola-Sudan.

Antiviral Drugs for Treatment of Arenavirus Infection
US8492434

Also published as: WO2007100888 // ZA200807506

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to, Arenaviridae (Junin, Machupo, Guanarito, Sabia, Lassa, Tacaribe, and Pichinde), Filoviridae (Ebola and Marburg viruses), Flaviviridae (yellow fever, Omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever).

MAMMALIAN GENES AND GENE PRODUCTS INVOLVED IN INFECTION
WO2013066442

The present disclosure relates to mammalian genes and gene products that are involved in infection or are otherwise associated with the life cycle of one or more pathogens. Disclosed herein are methods of reducing infection of a cell by a pathogen, for example to treat or prevent a pathogen infection. Exemplary pathogens include HIV-1, HIV-2, influenza A, Marburg virus and Ebola virus. The disclosure also relates to methods of identifying agents involved in pathogen infection.

Fluorescent quantitative PCR (polymerase chain reaction) method, primer and kit for detecting EBOV (Ebola virus)
CN103045755

The invention discloses a fluorescent quantitative PCR (polymerase chain reaction) method, primer and kit for detecting the EBOV (Ebola virus). The general method can be used for detecting that the sample to be detected is positive as long as the sample contains one or more of the five types of subtype EBOVs which are Z, S, B, C and R at the same time. The method overcomes the defects of the conventional PCR method for detecting by adopting the advantages of high-efficiency nucleic acid amplification of the PCR technology and the sensitivity of the fluorescence-dye SYBR Green I and the computer-aided fluorescent technology for detecting and improves the detection sensitivity, specificity and operation convenience greatly. In addition, the positive control adopted by the method is a section of RNA molecules transcribed in vitro of a NP gene, and the method is safer than the method for detecting by taking the inactivated virus solution as the positive control. The RNA molecules transcribed in vitro can be prepared in quantity, and the sources of the positive control are stable and reliable.

One-step process real-time fluorescent quantitative RT-PCR (Reverse Transcription-Polymerase Chain Reaction) method and kit for detecting Z/S subtype ebola viruses
CN103045754

The invention discloses a one-step process real-time fluorescent quantitative RT-PCR (Reverse Transcription-Polymerase Chain Reaction) method and kit as well as a primer and a probe for detecting Z/S subtype ebola viruses (EBOV). The one-step process real-time fluorescent quantitative RT-PCR method is a general detection method; and the PCR detection process can be used for detecting Z and S subtype EBOVs after being carried out once. A sample is positive as long as any one of the Z and S subtype EBOVs or both the Z and S subtype EBOVs exist in the sample to be detected. The one-step process MGB (Minor Groove Binder) probe fluorescent quantitative RT-PCR technology provided by the invention combines the advantages of efficient amplification of nucleic acids in a PCR technology and sensitivity of a MGB probe and a computer-assisted fluorescence detection technology, overcomes the shortcomings of conventional PCR detection and greatly increases detection sensitivity, specificity and convenience of operation.

Inhibition of TCR Signaling with Peptide Variants
US2013039948

The present invention provides compositions comprising peptides derived from amino acid sequences (or from combinations thereof) of fusion and other protein regions of various viruses, including but not limited to, severe acute respiratory syndrome coronavirus, herpesvirus saimiri, human herpesvirus 6, Lassa virus, lymphocytic choriomeningitis virus, Mopeia virus, Tacaribe virus, Friend murine leukemia virus; human T lymphotropic virus type 1; herpesvirus ateles; Marburg virus; Sudan Ebola virus; Zaire Ebola virus, and comprising L- and/or D-amino acids and combinations thereof, which affect T cells by acting on the T cell antigen receptor (TCR). More specifically, the peptides act on the TCR[alpha][beta]-CD3[delta][epsilon]-CD3[gamma][epsilon]-[zeta][zeta] signaling complex. Yet more specifically, the peptides act on the TCR[alpha]/CD3[delta][epsilon]/[zeta][zeta] signaling module of TCR. The present invention further relates to the prevention and therapy of various T cell-related disease states involving the use of these compositions. Specifically, the compositions are useful in the treatment and/or prevention of a disease or condition where T cells are involved or recruited. The compositions of the present invention also are useful in the production of medical devices comprising peptide matrices (for example, medical implants and implantable devices).

SMALL MOLECULE INHIBITORS OF EBOLA AND LASSA FEVER VIRUSES
WO2013022550

The present invention relates to compositions and methods for the treatment of infection by enveloped viruses, such as Ebola and Lassa fever viruses.

HEPATITIS C THERAPY
US8163703

Also published as: WO2006104945 // JP2012229216

PROBLEM TO BE SOLVED: To provide compounds which inhibit HCV viral polymerase. ; SOLUTION: The present invention relates to certain fused furan, thiophene and pyrrole compounds and particularly to fused furan, thiophene and pyrrole compounds that are useful as inhibitors of hepatitis B, hepatitis C, Polio, Coxsackie A and B, Rhino, Echo, small pox, Ebola, and West Nile virus polymerases.

Monoclonal Antibodies for Ebola and Marburg Viruses
US8513391

Described herein are a number of Ebola and Marburg monoclonal antibodies.

Lipid Formulated Compositions and Methods for Inhibiting Expression of a Gene from the Ebola Virus

US2012270921

Also published as: WO2011020023 // EP2464336

The invention relates to lipid formulated double-stranded ribonucleic acid (dsRNA) for inhibiting the expression of a gene from the Ebola virus.

THERAPEUTIC FUROPYRIMIDINE AND THIENOPYRIMIDINE
US8133870
JP2012167126

Also published as: WO2006050161 // JP2012167126

PROBLEM TO BE SOLVED: To provide therapeutic furopyrimidines and thienopyrimidines. ; SOLUTION: The invention provides compounds of formula I, II, and III as described herein, as well as pharmaceutical compositions comprising the compounds, and synthetic methods and intermediates that are useful for preparing the compounds. The compounds of formula I, II, and III are useful as anti-viral agents and/or as anti-cancer agents. The present invention provides compounds that are inhibitors of viral RNA and DNA polymerases (e.g. polymerases from hepatitis B, hepatitis C, human immunodeficiency virus, Polio, Coxsackie A and B, Rhino, Echo, small pox, Ebola, and West Nile virus) and that are useful for treating HCV, as well as other viral infections (e.g. flaviviral infections), and cancer.

Multiplex fluorescent polymerase chain reaction (PCR) kit and primers for detecting Ebola viruses, Marburg viruses, Lassa viruses and Rift Valley fever viruses
CN102719557

The invention provides a multiplex fluorescent polymerase chain reaction (PCR) kit and primers for detecting Ebola viruses, Marburg viruses, Lassa viruses and Rift Valley fever viruses. The multiplex fluorescent PCR kit comprises conventional reagents of an RT-PCR buffer and an RT-PCR enzyme mixed liquor and also comprises primers and probes for detecting the four viruses, wherein the primers are shown in sequences of SEG ID NO: 1-13 and the probes are shown in sequences of SEQ ID NO: 14-18. The multiplex fluorescent PCR kit, the primers and the probes realize rapid and accurate detection of pathogens of Ebola hemorrhagic fever, Marburg hemorrhagic fever, Lassa fever and Rift Valley fever, prevent the four infectious diseases from spreading into or out of the frontier port, are accurate and effective, have strong operability, and can be used for detection of the infectious diseases.; Through the multiplex fluorescent PCR kit, the primers and the probes, suspect cases can be found timely and a capability of preventing the infectious diseases from spreading into our country is improved.

Human Ebola Virus Species and Compositions and Methods Thereof
US2012251502

Also published as: WO2010048615 // EP2350270 // CA2741523

Compositions and methods including and related to the Ebola Bundibugyo virus (EboBun) are provided. Compositions are provided that are operable as immunogens to elicit and immune response or protection from EboBun challenge in a subject such as a primate. Inventive methods are directed to detection and treatment of EboBun infection.

Antiviral therapeutic agents comprising fused tricyclic compounds comprising a pyrrolo[1.2-f][1,2,4]triazine moiety
US7994139

Also published as: WO2009111653

Disclosed are pyrrolo[2,1-f][1,2,4]triazine compounds of formula I wherein ring B is a 5, 6, 7 or 8 membered heterocyclic ring comprising one or more double bonds, and is substituted with one or more oxo, thioxo or SO2R' group, salts thereof and methods for the compounds' preparation. The compounds of formula I are useful for treating cancer and viral infections such as hepatitis B, hepatitis C (HCV), human immunodeficiency virus (HIV), Polio, Coxsackie A and B, Rhino, Echo, small pox, Ebola, and West Nile virus.

GENERATION OF VIRUS-LIKE PARTICLES AND USE AS PANFILOVIRUS VACCINE
CA2768801

In this application are described filovirus-like particles for both Ebola and Marburg and their use as a diagnostic and therpeutic agent as well as a filovirus vaccine. Also described is the association of Ebola and Marburs with lipid rafts during assembly and budding, and the requirement of functional rafts for entry of filoviruses into cells.

INHIBITORS OF FILOVIRUS ENTRY INTO HOST CELLS
US2012189614

Also published as: WO2011046646 // EP2451278 // CA2767541 // AU2010307262

Organic compounds showing the ability to inhibit viral glycoprotein (GP)-mediated entry of a filovirus into a host cell are disclosed. The disclosed filovirus entry inhibitor compounds are useful for treating, preventing, or reducing the spread of infections by filovirus including the type species Marburg virus (MARV) and Ebola virus (EBOV). Preferred inhibitors of the invention provide therapeutic agents for combating the Ivory Coast, Sudan, Zaire, Bundibugyo, and Reston Ebola virus strains.

Anti-TSG101antibodies and their uses for treatment of viral infections

US7964708

Also published as: WO2008064072 // EP2514439

The present invention provides antibodies that bind to the C-terminal region of TSG101. The invention also provides these antibodies for use in the treatment of viral infections, including HIV and Ebola virus infection.

MONOCLONAL ANTIBODIES AGAINST GLYCOPROTEIN OF EBOLA SUDAN BONIFACE VIRUS
US2012164153

Also published as: WO2011071574 //EP2473525

We disclose Ebola Sudan Boniface virus GP Monoclonal antibodies, epitopes recognized by these monoclonal antibodies, and the sequences of the variable regions of some of these antibodies. Also provided are mixtures of antibodies of the present invention, as well as methods of using individual antibodies or mixtures thereof for the detection, prevention, and/or therapeutic treatment of Ebola Sudan Boniface virus infections in vitro and in vivo.

EARLY DIAGNOSTIC TECHNIQUE FOR EBOLA HEMORRHAGIC FEVER IN INDIVIDUALS PRESUMABLY INFECTED WITH SUCH VIRUS
RU2450274

FIELD: medicine. ^ SUBSTANCE: blood serum is sampled from individuals presumably infected with such virus for the first time in 3-4 hours and for the second time - in 15-18 hours after presumed infection. Each serum sample is examined for a level of hemolytic complement activity (HCA) by any known technique. If observing the HCA in 1.5-2.0 times and more for a specified period of time, the fact of body infection is stated, and the absence or minor change of the HCA shows the absence of body infection. The HCA level can be evaluated by unified technique showing intact sheep erythrocyte lysis with commercial hemolytic anti-sheep rabbit serum. ^ EFFECT: use of the technique enables earlier diagnosing of Ebola hemorrhagic fever that will allow prescribing a complete complex of therapeutic actions immediately

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OPTIMIZED VACCINES TO PROVIDE PROTECTION AGAINST EBOLA AND OTHER VIRUSES
US8101739

Also published as: WO2006037038

The invention is related to a nucleic acid molecule comprising a polynucleotide encoding a modified filovirus glycoprotein (GP) having at least one amino acid change located in a relatively conserved region of said GP that decreases in vitro cytotoxicity and retains

immunogenicity when compared to in vitro cytotoxicity and immunogenicity of a wild type filovirus GP, and related modified filovirus GPs, plasmid DNAs, recombinant viruses, adenoviruses, pharmaceutical compositions, vaccine compositions, antibodies that are specifically reactive with the modified filovirus GPs, and related methods of making and using the same.

ANTIVIRAL NUCLEOSIDE ANALOGS
US8440813

Also published as: WO2008089105 // SI2114980 // NZ578556

Disclosed is the use of a compound of formula (I) in the manufacture of a medicament for treating viral infections where in the substituents are as disclosed in the specification and examples of compounds of formula (I) are: (2S,3R,4R,5R)-2-(4-Aminopyrrolo[1,2-j][1,2,4]triazin-7-yl)-5-(hydroxymethyl)-3-methyltetrahydrofuran-3,4-diol; (2S,3R,4R,5R)-2-(4-(Dimethylamino)pyrrolo[1,2-j][1,2,4]triazin-7-yl)-5-(hydroxymethyl)-3-methyltetrahydrofuran-3,4-diol; and (2S,3R,4R,5R)-2-(4-Amino-5-bromopyrrolo[1,2-j][1,2,4]triazin-7-yl)-5-(hydroxymethyl)-3-methyltetrahydrofuran-3,4-diol. Examples of the viral infection are from the group consisting of: hepatitis B, hepatitis C, human immunodeficiency virus, Polio, Coxsackie A and B, Rhino, Echo, small pox, Ebola, and West Nile virus.

SULFONYL SEMICARBAZIDES, SEMICARBAZIDES AND UREAS, PHARMACEUTICAL COMPOSITIONS THEREOF, AND METHODS FOR TREATING HEMORRHAGIC FEVER VIRUSES, INCLUDING INFECTIONS ASSOCIATED WITH ARENAVIRUSES
WO2012060820

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel semicarbazides, sulfonyl carbazides, ureas and related compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to Arenaviridae (Junin, Machupo, Guanavito, Sabia and Lassa), Filoviridae (ebola and Marburg viruses), Flaviviridae (yellow fever, omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever).

Recombinant proteins from filoviruses and their use
US7947286

Also published as: WO2007044731

Filovirus subunit protein immunogens are produced using a recombinant expression system

and combined with one or more adjuvants in immunogenic formulations. The subunit proteins include GP95, GP-FL, VP40, VP24, and NP derived from Ebola Virus and Marburg Virus. Adjuvants include saponins, emulsions, alum, and dipeptidyl peptidase inhibitors. The disclosed immunogenic formulations are effective in inducing strong antibody responses directed against individual Filovirus proteins and intact Filovirus particles as well as stimulating cell-mediated immune responses to the Filoviruses.

C-ABL TYROSINE KINASE INHIBITORS USEFUL FOR INHIBITING FILOVIRUS REPLICATION
WO2012118599

This disclosure provides method of treating a Filoviridae viral infection, such as an Ebola virus infection or a Marburg virus infection, comprising providing an effective amount of a c-Abl tyrosine kinase inhibitor to a patient in need thereof. The c-Abl tyrosine kinase inhibitor may be a biological inhibitor that decreases expression of the c-Abl tyrosine kinase, such as a c-Abl tyrosine kinase specific siRNA. However it is preferred that the c-Abl tyrosine kinase inhibitor is a small molecule c-Abl tyrosine kinase antagonist. Suitable c-Abl tyrosine kinase antagonists include dasatinib, imatinib, and nilotinib and the pharmaceutically acceptable salts thereof

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SULFONYL SEMICARBAZIDES, SEMICARBAZIDES AND UREAS, PHARMACEUTICAL COMPOSITIONS THEREOF, AND METHODS FOR TREATING HEMORRHAGIC FEVER VIRUSES, INCLUDING INFECTIONS ASSOCIATED WITH ARENAVIRUSES
US8410149

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel semicarbazides, sulfonyl carbazides, ureas and related compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to Arenaviridae (Junin, Machupo, Guanavito, Sabia and Lassa), Filoviridae (ebola and Marburg viruses), Flaviviridae (yellow fever, omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever).

Generation of virus-like particles and use as panfilovirus vaccine
US2011280904

In this application are described filovirus-like particles for both Ebola and Marburg and their use as a diagnostic and therapeutic agent as well as a filovirus vaccine. Also described is the association of Ebola and Marburg with lipid rafts during assembly and budding, and the requirement of functional rafts for entry of filoviruses into cells.

COMPOSITIONS AND METHODS FOR TREATING EBOLA VIRUS INFECTION
US2011217328

Also published as: WO2009116983

The compositions and methods of the invention described herein provide treatments against Ebola virus infection by expressing gene(s) from the Ivory Coast ebolavirus (ICEBOV) species in a recombinant viral vector.

Marburg and Ebola dual-virus fluorescent quantitative PCR (Polymerase Chain Reaction) detection method and system
CN102140533

The invention discloses Marburg and Ebola dual-virus fluorescent quantitative PCR (Polymerase Chain Reaction) detection method and system, wherein the detection system comprises primers, probes, a Premix EX Taq reaction solution and sterilizing Tris water. As two pairs of primers and probes have very good specificity, the detection system has high sensitivity and is suitable for simultaneously detecting Marburg and Ebola viruses without having cross reaction with other kinds of hemorrhagic fever arbovirus, such as yellow fever, dengue and rift valley fever.

Novel Ebola virus fluorescent quantitative PCR (Polymerase Chain Reaction) detection method and system
CN102140532

The invention discloses Novel Ebola virus fluorescent quantitative PCR (Polymerase Chain Reaction) detection method and system, wherein the detection system comprises a primer, a probe, a Premix EX Taq reaction solution and sterilizing Tris water. As the primer and the probe has good detection specificity, the detection system has high sensitivity and is suitable for detecting Ebola viruses without having cross reaction with Marburg viruses.

Novel Marburg virus fluorescent quantitative PCR (Polymerase Chain Reaction) detection method and Marburg virus PCR detection system
CN102140531

The invention discloses a novel Marburg virus fluorescent quantitative PCR (Polymerase Chain Reaction) detection method and a Marburg virus PCR detection system. The system consists of a primer, a probe, Premix Ex Tag reaction liquid and sterilized Tris water. The primer and the probe have high detection specificity and high sensitivity, are very suitable for the Marburg virus, and do not undergoany cross reaction with an Ebola virus.

COMPOSITIONS AND METHODS FOR SILENCING EBOLA VIRUS GENE EXPRESSION
US8716464

Also published as: WO2011011447

The present invention provides compositions comprising therapeutic nucleic acids (e.g., interfering RNA such as siRNA) that target Ebola virus (EBOV) gene expression and methods of using such compositions to silence EBOV gene expression. More particularly, the invention provides unmodified and chemically modified interfering RNA which silence EBOV gene expression and methods of use thereof, e.g., for preventing or treating EBOV infections caused by one or more EBOV species such as Zaire EBOV. The invention also provides serum-stable nucleic acid-lipid particles comprising one or more interfering RNA molecules, a cationic lipid, and a non-cationic lipid, which can further comprise a conjugated lipid that inhibits aggregation of particles. Methods of silencing EBOV gene expression by administering one or more interfering RNA molecules to a mammalian subject are also provided.

CELL LINES AND HOST NUCLEIC ACID SEQUENCES RELATED TO INFECTIOUS DISEASE
US7927793

Also published as: WO2004070002 // EP1613724

Host nucleic acids and host proteins that participate in viral infection, such as human immunodeficiency virus (HIV), influenza A, and Ebola virus, have been identified. Interfering with or disrupting the interaction between a host nucleic acid or host protein and a virus or viral protein confers an inhibition of or resistance to infection. Thus, interfering with such an interaction in a host subject can confer a therapeutic or prophylactic effect against a virus. The sequences identified can be used to identify agents that reduce or inhibit viral infection.

Anti-Viral Drugs for Treatment of Arenavirus Infection
US8629170

Also published as: WO2007103111

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to, Arenaviridae (Junin, Machupo, Guanarito, Sabia, Lassa, Tacaribe, Pichinde, and LCMV), Filoviridae (Ebola and Marburg viruses), Flaviviridae (yellow fever, Omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever).

NANOSTRUCTURED DEVICES INCLUDING ANALYTE DETECTORS, AND RELATED METHODS
US2011171629

Also published as: WO2011056936

The present invention provides compositions and devices comprising nanostructure networks, and related methods. The compositions may exhibit enhanced interaction between nanostructures, providing improved device performance (e.g., improved conductivity). In some embodiments, the devices are capable of interacting with various species to produce an observable signal from the device. In some cases, the compositions and devices may be useful in the determination of analytes, including-biological analytes (e.g., DNA, ebola virus, other infective agents, etc.), small, organic analytes, and the like. The embodiments described herein may exhibit high sensitivity and specificity to analytes and may be capable of analyte detection at femtomolar concentrations (e.g., 10 fM).

METHODS OF USE OF ANTIVIRAL COMPOUNDS
US8440720

The present invention relates, in part, to methods of treatment, prevention, and inhibition of viral disorders. In one aspect, the present invention relates to inhibition of the M2 proton channel of influenza viruses (e.g. influenza A virus) and other similar viroporins (e.g., VP24 of Ebola and Marburg viruses; and NS3 protein of Bluetongue). The present invention further relates, inter alia, to compounds which have been shown to possess antiviral activity, in particular, inhibiting the M2 proton channel of influenza viruses.

Cobalt Hexammine as a Potential Therapeutic Against HIV and/or Ebola Virus
US2011027388

Hexaamminecobalt(III) chloride, also called Cohex, reduces the extent of viral infection, including difficult to treat infections caused by Ebola virus and HIV. Disclosed are methods for treating a viral infection, comprising administering to a patient a cobalt(III) hexammine compound in an amount effective to reduce an extent of a viral infection. Also disclosed are kits for delivery of a cobalt(III) hexammine compound by injection.

METHODS FOR PREVENTION AND TREATMENT OF INFECTIONS WITH SUPRAPHYSIOLOGICAL DOSES OF MANNAN-BINDING LECTIN (MBL) AND FICOLIN-MBL FUSION PROTEINS
US2010331240

Also published as: WO2009126346

The present invention provides methods of treatment and/or prevention of infections, for example, viral and bacterial infections, in individuals, wherein the method comprises administering a supraphysiological amount of mannose-binding lectin (MLB) and/or ficolin-MBL fusion protein to an individual afflicted with an infection or at risk of an infection, such as a bacterial or a viral infection. For example, methods for treatment and/or prevention of Ebola virus infection are provided.

ANTIVIRAL DRUGS FOR TREATMENT OF ARENAVIRUS INFECTION
US7977365

Also published as: CA2723086// WO2010036399 // JP2011518887

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to, Arenaviridae (Junin, Machupo, Guanarito, Sabia, Lassa, Tacaribe, Pichinde, and LCMV), Filoviridae (Ebola and Marburg viruses), Flaviviridae (yellow fever, Omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever and Crimean-Congo hemorrhagic fever).

STRAIN OF HYBRID ANIMAL CELLS Mus musculus L - PRODUCER OF MONOCLONAL ANTIBODIES FOR EXPOSING VP40 PROTEIN OF EBOLA VIRUS
RU2395577

FIELD: chemistry; biochemistry. ^ SUBSTANCE: invention discloses a strain of hybrid animal cells Mus musculus L.4 A2, which is deposited in the Collection of cell cultures of the State Research Center of Virology and Biotechnology VECTOR, which is a producer of monoclonal antibodies which are specific to the matrix protein VP40 of the Ebola virus, Zaire subtype (Mainga strain), and a strain of hybrid animal cells Mus musculus L. 1C1 which is deposited in the Collection of cell cultures of the State Research Center of Virology and Biotechnology VECTOR, which is a producer of monoclonal antibodies which are specific to the matrix protein VP40 of the Ebola virus, Zaire subtype (Mainga strain). The invention is also aimed at obtaining monoclonal antibodies 4A2 which are produced by the 4A2 hybridome, (subclass of immunoglobulins IgGl which have a heavy 55 kDa and a light 25 kDa chain) and are used as binding antigens in the "sandwich" format immunoenzymometric system for exposing the matrix protein VP40 of the Ebola virus, Zaire subtype (Mainga strain), and monoclonal antibodies 1C1 produced by the 1C1 hybridome (subclass of immunoglobulins IgGl which have a heavy 55 kDa and a light 25 kDa chain), used as biotin labelled indicators in the "sandwich" format immunoenzymometric system for exposing the matrix protein VP40 of the Ebola virus, Zaire subtype (Mainga strain). The disclosed antibodies are used together in a "sandwich" format immunoenzymometric system for exposing the matrix protein VP40 of the Ebola virus, Zaire subtype (Mainga strain). ^ EFFECT: invention enables to obtain monoclonal antibodies which are specific and do not

compete with each other for antigen epitopes and which, when used together in a "sandwich" format immunoenzymometric system, ensure high reliability of results for exposing the matrix protein VP40 of the Ebola virus.

STRAIN OF HYBRID ANIMAL CELLS Mus museums L - PRODUCER OF MONOCLONAL ANTIBODIES FOR EXPOSING NUCLEOPROTEIN OF EBOLA VIRUS
RU2395576

FIELD: chemistry; biochemistry. ^ SUBSTANCE: invention discloses a strain of hybrid animal cells Mus musculus L. 1B2, which is deposited in the Collection of cell cultures of the State Research Center of Virology and Biotechnology VECTOR, which is a producer of monoclonal antibodies which are specific to the nucleoprotein of the Ebola virus, Zaire subtype (Mainga strain) and are used as binding antigens in a "sandwich" format immunoenzymometric system for exposing the neucleoprotein of the Ebola virus, Zaire subtype (Mainga strain), and a strain of hybrid animal cells Rattus Norvegicus 7B11 which is deposited in the Collection of cell cultures of the State Research Center of Virology and Biotechnology VECTOR and which is a producer of monoclonal antibodies which are specific to the nucleoprotein of Ebola virus, Zaire subtype (Mainga strain); and are used as biotin labelled indicators in the "sandwich" format immunoenzymometric system for exposing nucleoprotein of the Ebola virus, Zaire subtype (Mainga strain). The invention describes monoclonal antibodies 1B2 which are produced by the strain of hybrid animal cells Mus musculus L. 1B2, which relate to the subclass of immunoglobulins IgGl which have a heavy 55 kDa and a light 25 kDa chain, and monoclonal antibodies 7B11 which are produced by the strain of hybrid animal cells Rattus Norvegicus 7B 11 related to the subclass of immunoglobulins IgG. The antibodies are used together in the "sandwich" format immunoenzymometric system for exposing nucleoprotein of the Ebola virus, Zaire subtype (Mainga strain). ^ EFFECT: use of the invention enables to obtain results during "Ä " laboratory reseach and when designing a test system for highly reliable exposure of an antigen

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INHIBITORS OF MICROBIAL INFECTIONS
WO2011000721

The present invention finds application in the field of medicine and, in particular, it relates to new compounds for the treatment and/or prevention of HIV; Ebola, Dengue, Hepatitis C, SARS or tuberculosis infections.

Generation of virus-like particles and use as panfilovirus vaccines
US2010143409

In this application are described filovirus-like particles for both Ebola and Marburg and their use as a diagnostic and therapeutic agent as well as a filovirus vaccine. Also described is the association of Ebola and Marburg with lipid rafts during assembly and budding, and the

requirement of functional rafts for entry of filoviruses into cells.

AZOLE NUCLEOSIDES AND USE AS INHIBITORS OF RNA AND DNA VIRAL POLYMERASES
US2010129317

Also published as: WO2008067002 // MX2009002707 // KR20090094800

Azole nucleosides represented by the formulae (I) and (II); wherein A=C or N B-C or N X-H; C1-C6 alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclo, halogen such as F, Cl, Br and I; OH, NH2, NH-(C1-C6 alkyl, cycloalkyl, aryl or heterocyclo); Z-H; C1-C6 alkyl, cycloalkyl, alkynyl, aryl, heterocyclo, halogen such as F, Cl, Br, I; OH NH2, NH-(C1-C6 alkyl, cycloalkyl, aryl or heterocyclo; E=(CH2)HONHR; n is an interger from 0-6 and more typically 0-3; R1= aryl or heterocyclo; each of W, Y, R is individually selected from the group consisting of H; C1-C6 alkyl, cycloalkyl, alkenyl, cycloalkenyl, alkynyl, aryl, heterocyclo, halogen such as F, Cl, Br, and I; O, OH, Oalkyl, Oaryl, NH2, NH(C1-C6 alkyl, cycloalkyl, aryl or heterocyclo); provided that at least one of W, Y, and R is other than H and wherein both W and Y together can be -O; and each D individually is OH, Oalkyl, Oaryl, FL and H; pharmaceutically acceptable salts thereof, prodrugs thereof and mixtures thereof are provided. Compounds of this disclosure are useful as inhibitors of viral RNA and DNA polymerases such as, but not limited to, Influenza, hantaan Virus, Crimean Congo hemorrhagic fever virus, hepatitis B, hepatitis C, Polio, Coxsackie A and B, Rhino, Echo, orthopoxvirus (small pox), HIV, Ebola, and West Nile virus polymerases; and especially orthopoxvirus, HIV, and hepatitis B.

ODCASE INHIBITORS AS ANTI-VIRALS AND ANTIBIOTICS
US8067391

Also published as: WO2007038859 // ES2436404 // EP1931691

The present invention includes the utility of anti-viral and/or antibacterial effective amounts of 6-substituted nucleoside derivatives of formula (I) (e.g. 6-iodouridine and 6-iodouridine monophosphate) in the treatment or prevention of viral infections (e.g. Flavivridae, Bunyaviridae, or Togaviridae, or viral infections of hepatitis C, hepatitis B, herpes, influenza, HIV, polio, Coxsackie A/B, rhino, small pox, Ebola, West Nile, or corona virus) and/or bacterial infections (e.g. H. pylori, S. Aureus, B. anthracis, Mycobacterial tuberculosis, M. leprae, M. avium, P. aueruginosa, Streptococcal species, and Pneumocystis carinii).

Method for the production of an agent against an infectious disease
US2010021556

Also published as: DE102006052504 // ZA200903936 // CN101686999 // RU2009118361 // JP2010508367

Disclosed is a method for producing an agent against an infectious disease, particularly HIV, Ebola, or similar. In said method, a pressurized, especially medical oxygen is swirled into a solution containing at least one plant component particularly in the form of an extract.

METHOD OF ACCELERATED VACCINATION AGAINST EBOLA VIRUSES
US8017130

Also published as: WO2005012538 // US7635485

The present invention relates to genetic vaccines for stimulating cellular and humoral immune responses in humans and other hosts, and, in particular, relates to recombinant viruses that express heterologous antigens of pathogenic viruses, in single dose form.

IMMUNOGENIC COMPOSITIONS AND VACCINES FOR EBOLA
US7736656

Using CTL epitopes to the Ebola GP, NP, VP24, VP30, VP35 and VP40 virion proteins, a method and composition for use in inducing an immune response which is protective against infection with Ebola virus is described.

D-GLUCOPYRANOSE 1-[3,5-BIS (1,1-DIMETHYLETHY)-4-HYDROXYBENZOATE] AND ITS DERIVATIVES, PREPARATION AND USE THEREOF
US2010016244

Also published as: WO2008000920 // EP2041152

The invention relates to a D-glucopyranose 1-[3,5-bis(1,1-dimethyl-ethyl)-4-hydroxybenzoate compound defined by formula (I). It applies in particular to the preparation and the use of this compound and of its derivatives for the preparation of medicaments for the treatment and/or prevention of infections with enveloped viruses, and in particular, in humans, the herpes virus, the Aids virus, the flu virus, the hepatitis B virus, the hepatitis C virus, the dengue virus and the ebola virus, and, in animals, the porcine pseudorabies virus, for example.

Sulfonyl Semicarbazides, Semicarbazides and Ureas, Pharmaceutical Compositions Thereof, and Methods for Treating Hemorrhagic Fever Viruses, Including Infections Associated with Arena Viruses
US8642596

Also published as: WO2006062898 // JP5285276

Compounds, methods and pharmaceutical compositions for treating viral infections, by administering certain novel semicarbazides, sulfonyl carbazides, ureas and related compounds in therapeutically effective amounts are disclosed. Methods for preparing the compounds and methods of using the compounds and pharmaceutical compositions thereof are also disclosed. In particular, the treatment and prophylaxis of viral infections such as caused by hemorrhagic fever viruses is disclosed, i.e., including but not limited to Arenaviridae (Junin, Machupo, Guanavito, Sabia and Lassa), Filoviridae (ebola and Marburg viruses), Flaviviridae (yellow fever, omsk hemorrhagic fever and Kyasanur Forest disease viruses), and Bunyaviridae (Rift Valley fever).

ANTISENSE ANTIVIRAL COMPOUNDS AND METHODS FOR TREATING A FILOVIRUS INFECTION
US8168604

Also published as: WO2006050414

The invention provides antisense antiviral compounds and methods of their use and production in inhibition of growth of viruses of the Filoviridae family, and in the treatment of a viral infection. The compounds and methods relate to the treatment of viral infections in mammals including primates by Ebola and Marburg viruses. The antisense antiviral compounds are morpholino oligonucleotides having: a) a nuclease resistant backbone, b) 15-40 nucleotide bases, and c) a targeting sequence of at least 15 bases in length that hybridizes to a target region selected from the following: i) the Ebola virus AUG start site region of VP24; ii) the Ebola virus AUG start site region of VP35; iii) the Marburg virus AUG start site region of VP24; or iv) the Marburg virus AUG start site region of NP.

ADJUNCTIVE TREATMENT OF BIOLOGICAL DISEASES
US2009170803

Also published as: WO03086408 // JP2006515829 // EP1496911

The present invention provides a therapeutic method for treating biological diseases that includes the administration of an effective amount of a suitable antibiotic agent, antifungal agent or antiviral agent in conjunction with an A2A adenosine receptor agonist. If no anti-pathogenic agent is known the A2A agonist can be used alone to reduce inflammation, as may occur during infection with antibiotic resistant bacteria, or certain viruses such as those that cause SARS or Ebola. Optionally, the method includes administration of a type IV PDE inhibitor.

Optimized vaccines to provide protection against Ebola and other viruses
ZA200703260

New pharmaceutical composition, useful for preventing or treating viral or bacterial infections caused by a pathogen selected from HIV-1 virus, Ebola virus, hepatitis C virus, Mycobacterium tuberculosis and Helicobacter pylori
AT505842

A pharmaceutical composition comprising polypeptide comprising any of fully defined 135 amino acids (SEQ ID NO1-3) given in the specification, is new. An independent claim is a complementary DNA (cDNA) encoding for polypeptide comprising any of SEQ ID NO. 1-3. - ACTIVITY : Virucide; Antibacterial; Anti-HIV; Antiinflammatory; Hepatotropic; Antitubercular; Tuberculostatic.

Assays for assembly of Ebola Virus Nucleocapsids
ZA200501243

VIRAL TREATMENT
WO2007100525

SARS, Ebola, Marburg, West Nile, German Measles, Yellow Fever, Saint Louis Encephalitis, Japanese Encephalitis, California Encephalitis, Human T-cell Leukemia, Newcastle Disease, respiratory tract infection and bronchitis, Lymphocytic Choriomeningitis, Lassa Hemorrhagic Fever, and Hanta Hemorrhagic Fever are treated by IM injection of a mixture comprising a first ingredient selected from the group consisting of procaine, chloroprocaine, tetracaine, chlorotetracaine, bromoprocaine, proparacaine, fluoroprocaine and benzocaine, and a second ingredient selected from the group consisting of dexamethasone, flumethasone and betamethasone.

TREATMENT OF HEMORRHAGIC VIRAL INFECTIONS USING A TISSUE FACTOR INHIBITOR
WO2007092607

The present invention relates to novel methods for the treatment of hemorrhagic viral infections, such as Ebola and Marburg virus, by administering a tissue factor inhibitor.

SARS AND EBOLA INHIBITORS AND USE THEREOF, AND METHODS FOR THEIR DISCOVERY
WO2008045017

The instant invention is drawn to methods useful for the treatment or the prevention of a viral infection. The methods include administering at least one compound that is an inhibitor of cathepsin L to an individual. The methods are particularly useful in individuals infected with, or at risk of infection with, SARS virus or Ebola virus. The invention also includes methods of identifying potential therapeutics for use in the methods of treatment or prevention of a

viral infection.

GENERATION OF VIRUS-LIKE PARTICLES AND USE AS PANFILOVIRUS VACCINE
WO2006046963

In this application are described filoviruslike particles for both Ebola and Marburg and their use as a diagnostic and therapeutic agent as well as a filovirus vaccine. Also described are the association of Ebola and Marburg with lipid rafts during assembly and budding, and the requirement of functional rafts for entry of filoviruses into cells.

PRODUCTION OF PEPTIDES IN PLANTS AS VIRAL COAT PROTEIN FUSION
WO2005108564

Vaccines and diagnostic composition are made and used for preventing, treating and detecting antigens from a papilloma virus, ebola virus, HIV virus, Rift Valley Fever virus or a parvovirus. The epitopes of these viruses are produced as genetically engineered fusion peptides in plants by infection with a recombinant tobamovirus vectors to express fusion proteins containing the epitope peptides.

IDENTIFICATION OF TWO LINEAR EPITOPES ON EBOLA OR MARBURG VIRUS GLYCOPROTEINS CRITICAL FOR INFECTION
WO2005063798

The present invention relates to a linear domain encompassing F88 and a linear domain encompassing F159 or functional equivalents thereof, substantially in isolation from sequences naturally occurring adjacent thereto in the Ebola or Marburg glycoprotein.

EBOLA PEPTIDES AND IMMUNOGENIC COMPOSITIONS CONTAINING SAME
US7267823
WO2005023837

Also published as: WO2005023837 // EP1608393

Using CTL epitopes to the Ebola GP, NP, VP24, VP30, VP35 and VP40 virion proteins, a method and composition for use in inducing an immune response which is protective against infection with Ebola virus is described.

Immunization for ebola virus infection
US6852324

Ebola virus vaccines comprising nucleic acid molecules encoding Ebola viral proteins are provided. In one embodiment, the nucleic acid molecule encodes the transmembrane form of the viral glycoprotein (GP). In another embodiment, the nucleic acid molecule encodes the secreted form of the viral glycoprotein (sGP). In yet another embodiment, the nucleic acid molecule encodes the viral nucleoprotein (NP). Methods for immunizing a subject against disease caused by infection with Ebola virus are also provided.

Targeting gene transfer vectors to certain cell types by pseudotyping with viral glycoprotein
US2005130129

Also published as: WO9937331 // EP1056478 // EP1056478 // AU2560999

The present invention provides compositions and methods for targeting gene transfer vectors to certain cell types by pseudotyping with a transmembrane form of viral glycoprotein, such as that from Ebola virus. The methods comprise the step of administering to a cell population a gene to be transferred operatively linked to an appropriate transfer vehicle, wherein the transfer vehicle is associated with a transmembrane form of viral glycoprotein.

Compositions and methods for detecting, preventing, and treating African Hemorrhagic Fever
US6713069

There is a substantial degree of structural similarity (although not sequence similarity) between the carboxy-terminal one-third of Filovirus glycoprotein and the transmembrane proteins of the very distantly related retroviruses, especially those of avian sarcoma viruses. The high degree of structural similarity implies functional homology as well. A number of compounds that are useful in the diagnosis and treatment of African hemorrhagic fever ("AHF") are disclosed. AHF infections (e.g., Ebola, Marburg) may be inhibited with low concentrations of peptides or antibodies of low toxicity. For example, analogs of a portion of the natural fusion glycoprotein of a Filovirus may be used to inhibit the normal fusion process of the virus in vivo, thus preventing or limiting infection.

Methods and compositions for use in the treatment of filovirus mediated disease conditions
US7803555
US6933108

Methods and compositions are provided for at least slowing the progression of a filovirus mediated disease condition in a host. In the subject methods, an effective amount of an agent that at least reduces the amount of folate receptor mediated filovirus cell entry is administered to the host. The subject methods find use in both the prevention and treatment of filovirus associated disease conditions, including Marburg and Ebola-Zaire virus mediated disease conditions.

Ebola virion proteins expressed from venezuelan equine encephalitis (VEE) virus replicons
US6984504

Also published as: WO0000617

Using the Ebola GP, NP, VP24, VP30, VP35 and VP40 virion proteins, a method and composition for use in inducing an immune response which is protective against infection with Ebola virus is described.

Selenoproteins, coding sequences and methods
US6303295

The present disclosure provides a method for the identification of nucleotide sequences which encode selenoproteins. Nucleotide sequences are translated in all potential reading frames, those with a relatively large number of UGA or TGA codons are noted, and frameshift-dependent open reading frames and SECIS elements are identified as associated with selenoprotein coding sequences, especially those within or overlapping known open reading frames. Further provided are selenoprotein coding sequences which are associated with certain viruses (e.g., HIV and Ebola), cancer-related genes and coding sequences related to normal functioning of the immune system.

Production of peptides in plants as viral coat protein fusions
US2004170606

Vaccines and diagnostic composition are made and used for preventing, treating and detecting antigens from a papilloma virus, ebola virus, HIV virus, Rift Valley Fever virus or a parvovirus. The epitopes of these viruses are produced as genetically engineered fusion peptides in plants by infection with a recombinant tobamovirus vectors to express fusion proteins containing the epitope peptides.

Monoclonal antibodies to Ebola glycoprotein
US6630144

Also published as: WO0116183 // WO0116183 // AU7089600

In this application are described Ebola GP monoclonal antibodies and epitopes recognized by these monoclonal antibodies. Also provided are mixtures of antibodies of the present invention, as well as methods of using individual antibodies or mixtures thereof for the detection, prevention, and/or therapeutical treatment of Ebola virus infections in vitro and in vivo.

Adenovirus vector with multiple expression cassettes
US6964762
US6544780

Also published as: WO0191536 // ZA200209676

Genetic vaccines and methods are provided for enhancing the immunity of a host such as a human to one or more pathogens. In one embodiment, a recombinant benign virus is provided as the genetic vaccine. The recombinant virus comprises: an antigen sequence heterologous to the recombinant virus that encodes a viral antigen from a pathogenic virus, expression of the viral antigen eliciting an immune response directed against the viral antigen and cells expressing the viral antigen in a host upon infection of the host by the recombinant virus; and an immuno-stimulator sequence heterologous to the recombinant virus that encodes an immuno-stimulator whose expression in the host enhances the immunogenicity of the viral antigen. The recombinant virus is replication-incompetent and does not causes a malignancy naturally associated with the pathogenic virus in the host. The genetic vaccines can be used for immunizing a host against a wide variety of pathogens, such as HIV, Ebola virus, hepatitis B virus, hepatitis C virus, influenza virus, pathogenic bacteria and parasites.

Pseudotyped retroviruses
US7981656

Also published as: WO03102219 // AU2003237374

Pseudotyped retroviruses having viral glycoproteins with modified O glycosylation regions are provided. Also provided are methods for making the pseudotyped retroviruses of the present invention and for using the pseudotyped retroviruses for transduction of target cells. Cells for stably producing the pseudotyped retroviruses or the present invention are also provided.

Chimeric ebola virus envelopes and uses therefor
US2005255123

Also published as: WO03092582 // AU2003232004

Chimeric ebola envelope proteins and uses therefore are described. The chimeric envelope proteins are useful for packaging viral vectors and targeting these vectors in vivo, to lung cells following intratracheal delivery or for delivery of molecules, ex vivo, to macrophages and dendritic cells. In another aspect, also provided herein are immunogenic compositions which contain ebola envelope proteins and uses thereof.

Mobile air decontamination method and device

US2004047776

Air decontamination method and device designed for bioterrorism, nerve gas, toxic mold, small pox, Ebola, anthrax and other agents require built in air sampling, rapid filter changes and the ability to use a mobile, transportable and connectable system in positive mode to push contaminates away or in negative mode to contain a toxin from spreading. This application combines features in respirators, industrial and hospital grade air filtration with the ability to provide air testing to guide the connection of the device with other treatment modules or existing HVAC and other equipment. With this new flexibility, ozone, UV, absorption, Thermal destruction, filters and liquid chemical neutralization can be manually or automatically adapted for emergency response to both daily airborne contamination and military grade terrorist threats of airborne contamination. The air decontamination units may be used to decontaminate the air after industrial and medical contaminations and terrorist biological, chemical and radiological attacks, for example. Mobile isolation units, and methods of decontaminating rooms, are disclosed, as well as Well as infection control and emergency response usage as an emergency clean air supply when connected to escape hoods, decon tents, or containment barriers to protect structures from homes to business from outside toxic agents. The unit can be powered by normal AC, 120 volts or 240 or be adapted to battery or field power supply units.

Lethal toxin cytopathogenicity and novel approaches to anthrax treatment
US2003224403

Inhibition of LeTx activity is provided as a treatment of anthrax infection. In particular, inhibition of the apoptotic effects of LeTx is provided as a targeted means of specifically treating anthrax infection. Treatments include inhibition of the Fas/FasL signaling pathway, inhibition of the effects of sFasL, inhibition of proteases of the caspase family and protection from loss of mitochondrial transmembrane potential in infected cells. Additionally, treatments targeting inhibition of apoptosis induced by LeTx activity include enhancement of the ERK (MAPK)-signaling pathway by agents including GM-CSF. The method of treating an infectious disease also comprises administering a combination of an antitoxin substance, which protects host cells from microbial toxin, and an antibiotic to an infected person. The anti-toxin substance includes different apoptosis inhibitors. Infection against which the treatment of the invention are effective include any disease leading to apoptosis of host cells such as, but not limited to, anthrax, plague, Ebola, or Marburg.

Generation of virus-like particles and demonstration of lipid rafts as sites of filovirus entry and budding
US2004057967

Also published as: WO03039477 // EP1461424

In this application is described a method for the formation of filovirus-like particles for both Ebola and Marburg and their use as a diagnostic and therapeutic agent as well as a filovirus vaccine. Also described is the association of Ebola and Marburg with lipid rafts during assembly and budding, and the requirement of functional rafts for entry of filoviruses into

cells.

Multivalent vaccination using recombinant adenovirus
US2003219458

Also published as: US2002155127 // ZA200403434 // WO03038057

Genetic vaccines and multivalent vaccination methods are provided for enhancing the immunity of a host such as a human to one or more pathogens. In one embodiment, a recombinant adenovirus is provided for eliciting immune response of a host to viral pathogens. The recombinant adenovirus comprises: a first antigen sequence that is heterologous to a native progenitor of the recombinant adenovirus and encodes a first viral antigen from a first pathogenic virus, expression of which is under the transcriptional control of a first promoter; and a second antigen sequence that is heterologous to a native progenitor of the recombinant adenovirus and encodes a second viral antigen from a second pathogenic virus, expression of which is under the transcriptional control of a second promoter. Expression of the first and second antigen sequences elicit an immune response directed against the first and second viral antigens upon infection of the host by the recombinant virus. The genetic vaccines can be used for immunizing a host against a wide variety of pathogens, such as HIV, Ebola virus, Marburg virus, hepatitis virus, influenza virus, respiratory syncytial virus, and human papilloma virus.

Recombinant lentiviral vectors pseudotyped in envelopes containing filovirus binding domains
US2004033604

Recombinant transfer viruses, comprising an HIV minigene carrying a desired molecule, packaged in an envelope containing at least the binding domain of the ebola envelope protein, are described. Also described are methods of producing these transfer viruses and methods of using these viruses to deliver genes to selected target cells. These transfer viruses are particularly useful for delivery of molecules, in vivo, to lung cells following intracheal delivery or for delivery of molecules, ex vivo, to macrophages and dendritic cells.

Use of bivalent or polyvalent trisaccharides as fusion-inhibitors in all HIV types, subtypes, groups, strains, and circulating recombinant forms
US2007093452

This invention relates to compositions containing bivalent or polyvalent trisaccharides, specifically but not exclusively, melezitose and raffinose, and to their use in the treatment/prevention/cure of HIV and AIDS. In particular, such compositions can be used to competitively inhibit formation of the viral fusion complex. This invention also relates to compositions containing bivalent or polyvalent trisaccharides, specifically but not exclusively, melezitose and raffinose, and to their use in other viral infections such as Influenza and Ebola, and furthermore to their use in the treatment of cancer. This invention

also relates to the identification of a formerly unidentified "density" present in the Phe43 cavity of HIV. This invention hereby identifies said density as cholesterol.

Monoclonal antibodies and complementarity-determining regions binding to Ebola glycoprotein
US7335356
US6875433

Also published as: WO2004018649

In this application are described Ebola GP monoclonal antibodies, epitopes recognized by these monoclonal antibodies, and the sequences of the variable regions of some of these antibodies. Also provided are mixtures of antibodies of the present invention, as well as methods of using individual antibodies or mixtures thereof for the detection, prevention, and/or therapeutical treatment of Ebola virus infections in vitro and in vivo.

Generation of virus-like particles and use as panfilovirus vaccine
US2006099225

In this application are described filovirus-like particles for both Ebola and Marburg and their use as a diagnostic and therapeutic agent as well as a filovirus vaccine. Also described is the association of Ebola and Marburg with lipid rafts during assembly and budding, and the requirement of functional rafts for entry of filoviruses into cells.

Generation of virus-like particles and use as panfilovirus vaccine
US7682618

In this application are described filovirus-like particles for both Ebola and Marburg and their use as a diagnostic and therapeutic agent as well as a filovirus vaccine. Also described is the association of Ebola and Marburg with lipid rafts during assembly and budding, and the requirement of functional rafts for entry of filoviruses into cells.

IMMUNIZATION FOR EBOLA VIRUS INFECTION
WO9932147

Ebola virus vaccines comprising nucleic acid molecules encoding Ebola viral proteins are provided. In one embodiment, the nucleic acid molecule encodes the transmembrane form of the viral glycoprotein (GP). In another embodiment, the nucleic acid molecule encodes the secreted form of the viral glycoprotein (sGP). In yet another embodiment, the nucleic acid molecule encodes the viral nucleoprotein (NP). Methods for immunizing a subject against disease caused by infection with Ebola virus are also provided.

Assays for assembly of ebola virus nucleocapsids
US7449190

Also published as: WO2004007747 // JP2005533111 // EP1543165

The present invention relates to assays for the identification of compounds that inhibit assembly of NP, VP35, and VP24, or inhibit the glycosylation of NP, required for nucleocapsid formation, for use as anti-viral agents. The invention also relates to assays for the identification of compounds that block glycosylation of proteins having a glycosylation domain that is substantially homologous to a glycosylation domain of NP required for polymerization. The invention further relates to pseudoparticles for presentation of antigens or antigenic epitopes for immunogenic or vaccination purposes.

PRODUCTION OF PEPTIDES IN PLANTS AS VIRAL COAT PROTEIN FUSIONS
WO2004032622

Also published as: EP1549140 // CA2497798

Vaccines and diagnostic composition are made and used for preventing, treating and detecting antigens from a papilloma virus, ebola virus, HIV virus, Rift Valley Fever virus or a parvovirus. The epitopes of these viruses are produced as genetically engineered fusion peptides in plants by infection with a recombinant tobamovirus vectors to express fusion proteins containing the epitope peptides.

RECOMBINANT LENTIVIRAL VECTORS PSEUDOTYPED IN ENVELOPES CONTAINING FILOVIRUS BINDING DOMAINS
WO0183730

Also published as: AU5372801

Recombinant transfer viruses, comprising an HIV minigene carrying a desired molecule, packaged in an envelope containing at least the binding domain of the ebola envelope protein, are described. Also described are methods of producing these transfer viruses and methods of using these viruses to deliver genes to selected target cells. These transfer viruses are particularly useful for delivery of molecules, in vivo, to lung cells following intracheal delivery or for delivery of molecules, ex vivo, to macrophages and dendritic cells.

Method to reduce inflammatory response in transplanted tissue
US7427606

The present invention provides a therapeutic method for treating biological diseases that includes the administration of an effective amount of a suitable antibiotic agent, antifungal agent or antiviral agent in conjunction with an A2A adenosine receptor agonist. If no anti-

pathogenic agent is known the A2A agonist can be used alone to reduce inflammation, as may occur during infection with antibiotic resistant bacteria, or certain viruses such as those that cause SARS or Ebola. Optionally, the method includes administration of a type IV PDE inhibitor.

METHOD OF PREPARING HETEROLOGICAL IMMUNOGLOBULINS FOR VIRAL INFECTIONS MARBURG AND EBOLA CONTROL
RU2089217

RECOMBINANT PLASMID DNA pCL1 ENCODING POLYPEPTIDE WITH PROPERTY OF HUMAN LIGHT CHAIN ANTIBODY AGAINST EBOLA VIRUS, RECOMBINANT PLASMID DNA pCH1 ENCODING POLYPEPTIDE WITH PROPERTY OF INDICATED ANTIBODY HEAVY CHAIN AND THEIR USING
RU2285043

FIELD: biotechnology, genetic engineering, virology, medicine. ^ SUBSTANCE: invention reports about the construction of recombinant plasmid DNAs pCL1 and pCH1 in vitro comprising artificial genes encoding light and heavy chains of human full-scale antigen against Ebola virus prepared by genetic engineering methods and created on basis of variable fragments of recombinant antibody 4d1 light and heavy chains from phage library of human single-chain antibody, and human constant genes IgG1, cytomegalovirus promoter and polyadenylation BGH site. The combining use of plasmid DNA pCL1 and pCH1 provides the biosynthesis of human recombinant full-size antibodies of class IgG1 interacting with Ebola virus.; Using recombinant full-size antibodies raised against Ebola virus can be used as a basis for the development of preparations used in diagnosis and treatment of dangerous diseases caused by this infectious agent. ^ EFFECT: valuable medicinal properties of plasmid.

METHOD OF PROPHYLAXIS OF VIRAL AEROGENIC INFECTIONS
RU2105565

FIELD: medicine, veterinary science, virology. SUBSTANCE: method involves intramuscular or intranasal administration of reaferon and/or ridostin, and/or polyribonate before or at period of possible infection. EFFECT: enhanced effectiveness of viral aerogenic infections prophylaxis.

DEVELOPMENT OF PREVENTIVE VACCINE FOR FILOVIRUS INFECTION IN PRIMATES
US7094598

Also published as: JP4198148 // WO03028632

PROBLEM TO BE SOLVED: To provide methods of eliciting an immune response against a filovirus such as Ebola virus and for preventing diseases caused by infection with the filovirus. ; SOLUTION: Disclosed is an expression vector comprising a specific base sequence encoding virion glycoproteins or a base sequence having at least 95 to 100% identity to the base sequence, wherein the expression vector comprises base sequences directing expression.

MONOCLONAL ANTIBODY AGAINST RESTON EBOLA VIRUS AND METHOD FOR DETECTING RESTON EBOLA VIRUS USING THE SAME
JP2004315394

PROBLEM TO BE SOLVED: To obtain a monoclonal antibody specific to Reston Ebola virus and to provide a method for differentiating and diagnosing Reston Ebola virus using the antibody. ; SOLUTION: The monoclonal antibody is specific to Reston Ebola virus, especially the monoclonal antibody recognizes an epitope composed of a region of an amino acid sequence specific to the virus among nucleoproteins that Reston Ebola virus has. The monoclonal antibody recognizes an epitope composed of a region of four or more of amino acid residues of sequence DPDIGQSK of a specific region in amino acid sequences among nucleoproteins that Reston Ebola virus has. The method for differentiating and diagnosing Reston Ebola virus by the antigen-catching ELISA (enzymelinked immunosorbent assay) process comprises using the monoclonal antibody specific to Reston Ebola virus.

MONOCLONAL ANTIBODY RECOGNIZING EBOLA VIRUS
JP2002306164

PROBLEM TO BE SOLVED: To provide a monoclonal antibody specifically recognizing an Ebola virus. SOLUTION: A monoclonal antibody or its fragment recognizing the nucleoprotein of an Ebola virus.

TREATING INFECTIONS
WO0187229

Also published as: AU2001258675

Phenolic antioxidants in combination with a delivery vehicle which avoids releasing the phenolic antioxidants in the stomach of a subject are disclosed for use in the prophylaxis and therapy of infections, especially retroviral infections by the HIV and filoviral infections by the Ebola virus. These compounds can be administered in combination with proteolytic enzymes and/or antioxidants.

Phosphonate ester antiviral compounds
EP1914237

The present invention relates to phosphonate ester compounds formed by the covalent linking of a phosphonate selected from (a) cidofovir or tenofovir; (b) an antiviral nucleoside phosphonate or an antiproliferative nucleoside phosphonate; and (c) a derivative of cytosine arabinoside, gemcitabine, 5-fluorodeoxyuridine riboside, 2-chlorodeoxyadenosine, fludarabine or 1-beta-D-arabinofuranoxyl-guanine; to an alkylpropanediol. The compounds are used in the preparation of medicaments for treating a viral disease in a subject in need thereof, wherein said viral disease is selected from the human immunodeficiency virus, influenza, the herpes simplex virus, the human herpes virus, the cytomegalovirus, the hepatitis B and C virus, the Epstein-Barr virus, the varicella zoster virus, the orthopox virus, the ebola virus and the papilloma virus.

Identifying viruses that cause hemorrhagic fever, e.g. Ebola virus, useful for early and rapid diagnosis, comprises hybridization of nucleic acid with an array of probes DE10121214

Identifying (i) viruses (A) that cause hemorrhagic fever and (ii) pathogens (B) that, from the disease symptoms, may be confused with (A) comprising detecting hybridization with nucleic acid probes on an array, is new.

TROJAN INHIBITORS, METHOD FOR THE PRODUCTION AND USE THEREOF WO03064453

Also published as: DE10304202 // AU2003208275

The invention relates to active inhibitors - trojan inhibitors (TI) - and the use thereof in the form of specifically shaped trojan proteasome-inhibitors (TPI) or trojan assembling-inhibitors (TAI), such as proteasome-and assembling-inhibitors which are, initially, inactive and are only activated in the target cell by means of a specific protease for the target cell. According to the invention, said inhibitor can be used in the treatment of viral infections, whereby a virus-specific protease is expressed, particularly in HIV-infections and AIDS-therapy, and optionally in the inhibition of the release, maturing and replication of filo viruses, and in the treatment and prevention of viral haemorrhagic fever (activated by Ebola or Marburg-viruses) and in the therapy of tumoral diseases, whereby the tumour cells are characterised by a specific protease.

Prepn and application of natural bamboo vinegar disinfectant liquid CN1547908

The present invention collects filtrate produced during baking bamboo charcoal and utilizes it as natural bamboo vinegar disinfectant liquid. The natural bamboo vinegar liquid is used as main material for preparing bamboo vinegar liquid containing Ag, Zn, Cu and other metal ions, and is compounded with proper amount of stabilizer to prepare spray or concentrated preparation. The disinfectant of the present invention can kill various viruses and pathogenetic bacteria and is non-toxic and non-excitant, and may be used widely in

preventing dandy fever, Ebola virus, bird flu and other infectious diseases, household disinfection, and killing fungus.

POLYOXOMETALLATE ANTIFILOVIRAL COMPOSITION
WO9921569

A method of prophylactic or therapeutic inhibition of Ebola virus and other filoviruses in a human or non-human animal patient which comprises administering to the patient an effective amount of a heteropolytungstate selected from one of the following formulae: AnM1-4WqOr, AnYMXW11O39, An[(FeOA)4P2W18O68], An[Co(OH)3(H2O)6(HPO4)2(P3W27O102)], or AnP2W15O56. Where A = a cation, n = number of cations for electrical neutrality; Y = a ligand; X = B, P, Si, Ge, Zn, Co, Fe, Ga, Ti, Zr, V or Cu; M is selected from various metals or combinations thereof; q = 9-11, 15-18, 22, 30 or 34, and r = 39, 40, 56, 62, 65, 68, 78, 102, 112 or 122.
