Grippe Aviaire

Février 2007

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LISTE DES TITRES

060409101
PASCAL

10 questions sur la grippe aviaire

Titre : 10 questions sur la grippe aviaire

Auteur(s) : COISNE Sophie
Source : Recherche Paris 1970. 2006; (393) : 42-45
ISSN : 0029-5671
CODEN : RCCHBV
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : 6 ref.

Code(s) de classement : 002B05C03

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Influenza; Human; Chicken; Risk factor; Mutation; Vaccine; Antiviral; Treatment; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Virology; Infectious diseases; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus; Viral disease; Infection; Aves; Vertebrata
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Grippe; Homme; Poulet; Facteur risque; Mutation; Vaccin; Antiviral; Traitement; Pandemie; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus; Virose; Infection; Aves; Vertebrata
Localisation : INIST, Shelf number 6273, INIST No. 354000134348330010

Origine de la notice : INIST

060412192
PASCAL

Transcutaneous immunization with inactivated influenza virus induces protective immune responses

Titre : Transcutaneous immunization with inactivated influenza virus induces protective immune responses

Auteur(s) : SKOUNTZOU Ioanna; QUAN Fu Shi; JACOB Joshy; COMPANS Richard W; KANG Sang Moo
Affiliation(s) : Department of Microbiology and Immunology and Emory Vaccine Center, Emory University School of Medicine, 1510 Clifton Road, Atlanta, GA 30322, United States

Source : Vaccine . 2006; 24 (35-36) : 6110-6119
ISSN : 0264-410X
CODEN : VACCDE
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 48 ref.

Résumé : The recent outbreaks of highly pathogenic avian influenza in Asia and spread of the disease worldwide highlight the need to redefine conventional immunization approaches and establish effective mass vaccination strategies to face global pandemics. Transcutaneous immunization (TCI) is a novel route for vaccination, which uses the topical application of vaccine antigens on the skin. In this study, we investigated the potential of TCI using inactivated whole influenza virus. We found that TCI with whole inactivated influenza virus induced influenza virus-specific antibodies with hemagglutination inhibition and neutralizing activities as well as cellular immune responses, even without an adjuvant, and conferred protective immunity to virus challenge. Co-administration with cholera toxin (CT), a potent adjuvant for TCI, significantly enhanced immune responses against the influenza virus antigen. To enhance penetration of the skin barrier to the particulate influenza viral antigens, we tested the effects of the potential penetration enhancers/immunomodulators oleic acid (OA) and retinoic acid (RA). Pretreatment of mouse skin with OA elicited increased levels of influenza virus-specific binding and neutralizing antibodies to levels equivalent to those induced by intranasal immunization with inactivated influenza virus. OA and RA treatments differentially affected the pattern of cytokine production upon stimulation with influenza viral antigen and provided enhanced protection. These results reveal a promising perspective for the application of transcutaneous immunization to prevent influenza epidemics as well as a range of other infectious diseases.

Code(s) de classement : 002A05F04; 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Percutaneous route; Immunization; Vaccine; Immunoprotection
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus; Voie percutanee; Immunisation; Vaccin; Immunoprotection
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 20289, INIST No. 354000133528780090

Origine de la notice : INIST

060413897
PASCAL

Chemical-biological terrorism and its impact on children

Titre : Chemical-biological terrorism and its impact on children

Auteur(s) : Committee on Environmental Health and Committee on Infectious Diseases, Unknown
Source : Pediatrics Evanston. 2006; 118 (3) : 1267-1278
ISSN : 0031-4005
CODEN : PEDIAU
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 53 ref.

Résumé : Children remain potential victims of chemical or biological terrorism. In recent years, children have even been specific targets of terrorist acts. Consequently, it is necessary to address the needs that children would face after a terrorist incident. A broad range of public health initiatives have occurred since September 11, 2001. Although the needs of children have been addressed in many of them, in many cases, these initiatives have been inadequate in ensuring the protection of children. In addition, public health and health care system preparedness for terrorism has been broadened to the so-called all-hazards approach, in which response plans for terrorism are blended with plans for a public health or health care system response to unintentional disasters (eg, natural events such as earthquakes or pandemic flu or manmade catastrophes such as a hazardous-materials spill). In response to new principles and programs that have appeared over the last 5 years, this policy statement provides an update of the 2000 policy statement. The roles of both the pediatrician and public health agencies continue to be emphasized; only a coordinated effort by pediatricians and public health can ensure that the needs of children, including emergency protocols in schools or child care centers, decontamination protocols, and mental health interventions, will be successful.

Code(s) de classement : 002B01

Descripteur(s) anglais
Descripteur(s) : Biology; Terrorism; Child; Emergency; Preparation; Dragging; Teaching; Pediatrics
Desc. génériques : Medical sciences; Human
Descripteur(s) français
Descripteur(s) : Biologie; Terrorisme; Enfant; Urgence; Preparation; Entrainement; Enseignement; Pediatrie; Etat de preparation
Desc. génériques : Sciences medicales; Homme
Localisation : INIST, Shelf number 6967, INIST No. 354000133590140500

Origine de la notice : INIST

060416127
PASCAL

A microsphere immunoassay for detection of antibodies to avian influenza virus

Titre : A microsphere immunoassay for detection of antibodies to avian influenza virus

Auteur(s) : DEREGT Dirk; FURUKAWA STOFFER Tara L; TOKARYK Kara L; PASICK John; BURTON HUGHES Kimberley M; HOOPER MCGREVY Kathleen; BAXI Shailja; BAXI Mohit K
Affiliation(s) : Virology Section, Lethbridge Laboratory (Animal Diseases Research Institute), Canadian Food Inspection Agency, P.O. Box 640, Lethbridge, Alberta T1J 3Z4, Canada; National Centre for Foreign Animal Diseases, Winnipeg Laboratory, Canadian Food Inspection Agency, 1015 Arlington Street, Winnipeg, Manitoba R3E 3M4, Canada

Source : Journal of virological methods. 2006; 137 (1) : 88-94
ISSN : 0166-0934
CODEN : JVMEDH
Date de publication : 2006
Pays de publication : Netherlands
Langue(s) : English
Type de document : Serial
Nombre de références : 19 ref.

Résumé : A microsphere immunoassay (MIA) was developed for the detection of serum antibodies to avian influenza virus. A recombinant influenza A nucleoprotein expressed in baculovirus was conjugated to microspheres and incubated with antibodies. High median fluorescent intensities (MFIs) were obtained with a monoclonal antibody and positive chicken sera. Chickens were inoculated with 10 strains of avian influenza virus representing different subtypes, including high and low pathogenic H5 and H7 subtypes. Three hundred and fifty-four samples from experimentally infected chickens and controls were tested with a competitive ELISA (cELISA) and the MIA. MFIs were converted to positive/negative (PN) ratios. The results of both tests, as percentage inhibition and PN ratio, showed a high correlation (R<sup>2 = 0.77). From the comparison data, a ratio of >=4.5 was selected as the cut-off value for positivity in the MIA. Using this cut-off value, the sensitivity and specificity of the MIA relative to the cELISA when all discordant experimental samples were retested was 99.3 and 93.1%, respectively. The relative specificity increased to 94.7% when additional negative sera (n = 68) were tested. The MIA may be useful for surveillance testing and as a screening test for flocks infected with low pathogenic avian influenza virus and could be expanded for simultaneous detection of antibodies against other avian infectious disease agents.

Code(s) de classement : 002A05C09

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Detection; Antibody; Microbiology; Method; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Detection; Anticorps; Microbiologie; Methode; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 18295, INIST No. 354000133543610130

Origine de la notice : INIST

060417574
PASCAL

Is the price of cheap chicken bird flu?

Titre : Is the price of cheap chicken bird flu?

Auteur(s) : PERKINS Eva C
Source : Searcher Medford NJ. 2006; 14 (6) : 8-16 [6 p.]
ISSN : 1070-4795
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial

Résumé : Un certain nombre d' informations et de statistiques utiles concernant la grippe aviaire peuvent etre trouvees sur les sites Web des organismes suivants : Centers for Diseases Control and Prevention, le Ministere de l' Agriculture des Etats-Unis, l' Organisation Mondiale de la Sante, la base de donnees Pubmed de la National Library of Medicine, Grain et BirdLife International.

Code(s) de classement : 001A01D02B; 205

Descripteur(s) anglais
Descripteur(s) : Information source; Biomedical information; Communicable disease; Poultry
Desc. génériques : Information sciences; Documentation
Descripteur(s) français
Descripteur(s) : Source information; Information biomedicale; Maladie contagieuse; Volaille; Grippe aviaire
Desc. génériques : Sciences de l'information; Documentation
Localisation : INIST, Shelf number 27485, INIST No. 354000153150220010

Origine de la notice : INIST

060423966
PASCAL

A household survey to assess the burden of influenza in rural Thailand

Titre : A household survey to assess the burden of influenza in rural Thailand

Auteur(s) : CLAGUE Birgit; CHAMANY Shadi; BURAPAT Channawong; WANNACHAIWONG Yupapan; SIMMERMAN J Mark; DOWELL Scott F; OLSEN Sonja J
Affiliation(s) : International Emerging Infections Program, Thai MOPH - US CDC Collaboration, Nonthaburi, Thailand; Office of Workforce and Career Development, Centers for Disease Control and Prevention, Atlanta, Georgia, United States; Sa Kaeo Provincial Health Office, Sa Kaeo, Thailand

Source : Southeast Asian journal of tropical medicine and public health. 2006; 37 (3) : 488-493
ISSN : 0125-1562
CODEN : SJTMAK
Date de publication : 2006
Pays de publication : Thailand
Langue(s) : English
Type de document : Serial
Nombre de références : 13 ref.

Résumé : Little is known about the disease burden of influenza in middle-income tropical countries like Thailand. The recent outbreak of avian influenza (H5N1) and studies on influenza from neighboring countries highlight the need for data on incidence, access to care, and health care cost. In May/ June 2003, we conducted a province-wide household survey using two-stage cluster sampling to determine the burden of influenza-like illness in Sa Kaeo Province. We used the total number of reported influenza that occurred in May 2003 and a prospective study of outpatient influenza in clinic patients to develop an estimate of the annualized incidence of influenza. Of 718 subjects, 16 (2.2%) suffered an episode of influenza-like illness in the preceding month; 14 sought care, of whom 7 went to a hospital facility. Fifty percent reported missing on average 3 days of work or school. The total individual cost per illness episode was 663 baht (US$15.78). The proportion of outpatients with influenza-like illness caused by an influenza virus in May was 16% and the annualized influenza incidence was estimated to be 5,941/100,000 in Sa Kaeo Province. This survey adds to information indicating that in rural Thailand, the burden of influenza is substantial and costs associated with an illness episode are up to 20% of an average monthly income.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza; Surveillance; Rural environment; Thailand; Tropical medicine
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Asia
Descripteur(s) français
Descripteur(s) : Grippe; Surveillance; Milieu rural; Thailande; Medecine tropicale
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Asie
Localisation : INIST, Shelf number 19778, INIST No. 354000133569110090

Origine de la notice : INIST

060428675
PASCAL

Management de la securite des aliments. De l' HACCP a l' ISO 22000

Titre : Management de la securite des aliments. De l' HACCP a l' ISO 22000

Auteur(s) : BOUTOU Olivier
Source : 2006; 314 p.; fig., tabl.
Éditeur : AFNOR, Paris
ISBN : 2124401106
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Book
Nombre de références : dissem.

Résumé : La qualite irreprochable des produits exigee par le consommateur final, la maitrise des risques lies a la securite alimentaire et l' internationalisation des echanges sont autant d' enjeux auxquels doivent faire face les acteurs du marche agroalimentaire. De plus, les crises de ces dernieres annees (maladie de la vache folle, grippe aviaire, listeria...) ont entraine une defiance de la part des consommateurs. Afin de rendre plus clairs et plus accessibles les travaux du Codex Alimentarius et les nombreux textes reglementaires, et afin d' aider ces professionnels de l' alimentation a mettre en place des dispositifs de management oriente securite alimentaire, un ensemble de partenaires ont choisi de faire partager leurs experiences au travers des referentiels dont le plus recent est l' ISO 22000, "Systemes de management de la securite des denrees alimentaires - Exigences pour tout organisme appartenant a la chaine alimentaire". Ce referentiel, regroupant les essentiels en la matiere, est un ensemble de regles de bonnes pratiques d' hygiene, qui complete les principes de l' HACCP (Hazard Analysis Critical Contrat Point). Olivier Boutou decrypte dans cet ouvrage l' ISO 22000, ses fondements, ses principes et sa mecanique. La norme ainsi explicitee devient facilement applicable, et permet de mettre en place un management de securite des denrees alimentaires... efficient !

Code(s) de classement : 002B30A11

Descripteur(s) anglais
Descripteur(s) : Feeding; Standards; Quality; Regulation; Hygiene; Food industry; Product; Safety
Desc. génériques : Public health; Medical sciences
Descripteur(s) français
Descripteur(s) : Alimentation; Norme; Qualite; Reglementation; Hygiene; Industrie alimentaire; Produit; Securite; International standards organisation
Desc. génériques : Sante publique; Sciences medicales
Localisation : BDSP/ENSP, Shelf number 152120, CK50/0188

Origine de la notice : BDSP

060439461
PASCAL

Global patterns of influenza A virus in wild birds

Titre : Global patterns of influenza A virus in wild birds

Auteur(s) : OLSEN Bjorn; MUNSTER Vincent J; WALLENSTEN Anders; WALDENSTROM Jonas; OSTERHAUS Albert D M E; FOUCHIER Ron A M
Affiliation(s) : Department of Infectious Diseases, Umea University, 90187 Umea, Sweden; Section for Zoonotic Ecology and Epidemiology, Department of Biology and Environmental Science, University of Kalmar, 39182 Kalmar, Sweden; Department of Virology, Erasmus Medical Center, Rotterdam, Netherlands; Smedby Health Center, Kalmar County Council, 39471 Kalmar, Sweden; Division of Virology, Department of Molecular and Clinical Medicine (IMK) Faculty of Health Sciences, Linkoping University, 581 85 Linkoping, Sweden; Department of Animal Ecology, Lund University, 22362 Lund, Sweden

Source : Science Washington DC. 2006; 312 (5772) : 384-388
ISSN : 0036-8075
CODEN : SCIEAS
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Notes : 1/4 p. ref. et notes

Résumé : The outbreak of highly pathogenic avian influenza of the H5N1 subtype in Asia, which has subsequently spread to Russia, the Middle East, Europe, and Africa, has put increased focus on the role of wild birds in the persistence of influenza viruses. The ecology, epidemiology, genetics, and evolution of pathogens cannot be fully understood without taking into account the ecology of their hosts. Here, we review our current knowledge on global patterns of influenza virus infections in wild birds, discuss these patterns in the context of host ecology and in particular birds' behavior, and identify some important gaps in our current knowledge.

Code(s) de classement : 002A05C04

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Public health; Fauna; Wild animal; Aves; Ecology; Epidemiology; Genetics; Evolution; Pathogenicity; Migratory; Transmission from animal to animal; Europe; Asia; Review
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Vertebrata
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Sante publique; Faune; Animal sauvage; Aves; Ecologie; Epidemiologie; Genetique; Evolution; Pouvoir pathogene; Migrateur; Transmission animal animal; Europe; Asie; Article synthese
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Vertebrata
Localisation : INIST, Shelf number 6040, INIST No. 354000142715070130

Origine de la notice : INIST

060439455
PASCAL

The structure of H5N1 avian influenza neuraminidase suggests new opportunities for drug design

Titre : The structure of H5N1 avian influenza neuraminidase suggests new opportunities for drug design

Auteur(s) : RUSSELL Rupert J; HAIRE Lesley F; STEVENS David J; COLLINS Patrick J; YI PU LIN; BLACKBURN G Michael; HAY Alan J; GAMBLIN Steven J; SKEHEL John J
Affiliation(s) : MRC National Institute for Medical Research, The Ridgeway, Mill Hill, London NW7 1AA, United Kingdom; Department of Chemistry, University of Sheffield, Sheffield S3 7HF, United Kingdom

Source : Nature London. 2006; 443 (7107) : 45-49
ISSN : 0028-0836
CODEN : NATUAS
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 34 ref.

Résumé : The worldwide spread of H5N1 avian influenza has raised concerns that this virus might acquire the ability to pass readily among humans and cause a pandemic. Two anti-influenza drugs currently being used to treat infected patients are oseltamivir (Tamiflu) and zanamivir (Relenza), both of which target the neuraminidase enzyme of the virus. Reports of the emergence of drug resistance make the development of new anti-influenza molecules a priority. Neuraminidases from influenza type A viruses form two genetically distinct groups: group-1 contains the N1 neuraminidase of the H5N1 avian virus and group-2 contains the N2 and N9 enzymes used for the structure-based design of current drugs. Here we show by X-ray crystallography that these two groups are structurally distinct. Group-1 neuraminidases contain a cavity adjacent to their active sites that closes on ligand binding. Our analysis suggests that it may be possible to exploit the size and location of the group-1 cavity to develop new anti-influenza drugs.

Code(s) de classement : 002B02S05; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Subtype; Exo <alpha> sialidase; Development; New product; Drug; Antiviral; Mechanism of action; Design
Desc. génériques : Virology; Infectious diseases; Pharmacology; Medical sciences; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; O Glycosidases; Glycosidases; Hydrolases; Enzyme
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Soustype; Exo <alpha> sialidase; Developpement; Produit nouveau; Medicament; Antiviral; Mecanisme action; Conception; Virus H5N1
Desc. génériques : Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; O Glycosidases; Glycosidases; Hydrolases; Enzyme
Localisation : INIST, Shelf number 142, INIST No. 354000142259820120

Origine de la notice : INIST

Neuraminidase pharmacophore model derived from diverse classes of inhibitors

Titre : Neuraminidase pharmacophore model derived from diverse classes of inhibitors

Auteur(s) : JIAN ZHANG; KUNQIAN YU; WEILIANG ZHU; HUALIANG JIANG
Affiliation(s) : Drug Discovery and Design Centre, State Key Laboratory of Drug Research, Shanghai Institute of Materia Medica, Shanghai Institutes for Biological Sciences, and Graduate School, Chinese Academy of Sciences, 555 Zuchongzhi Road, Shanghai 201203, China; School of Pharmacy, East China University of Science and Technology, Shanghai 200237, China

Source : Bioorganic and medicinal chemistry letters Print. 2006; 16 (11) : 3009-3014
ISSN : 0960-894X
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 25 ref.

Résumé : A three-dimensional pharmacophore model was developed based on 22 currently available inhibitors, which were carefully selected with great diversity in both molecular structure and bioactivity, for discovering new potent neuraminidase (NA) inhibitors to fight against avian influenza virus. The best hypothesis (Hypol), consisting of five features, namely, one positive ionizable group, one negative ionizable group, one hydrophobic point, and two hydrogen-bond donors, has a correlation coefficient of 0.902, a root mean square deviation of 1.392, and a cost difference of 72.88, suggesting that a highly predictive pharmacophore model was successfully obtained. The application of the model shows great success in predicting the activities of 88 known NA inhibitors in our test set with a correlation coefficient of 0.818 with a cross-validation of 98% confidence level. Accordingly, our model should be reliable in identifying structurally diverse compounds with desired biological activity.

Code(s) de classement : 002B02S05

Descripteur(s) anglais
Descripteur(s) : Exo <alpha> sialidase; Modeling; Three dimensional model; Enzyme inhibitor; Molecular structure; Antiviral; Avian influenzavirus; Hydrogen bond; Correlation coefficient; Prediction; Cross validation; Structure activity relation
Desc. génériques : Virology; Infectious diseases; Pharmacology; Medical sciences; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Exo <alpha> sialidase; Modelisation; Modele 3 dimensions; Inhibiteur enzyme; Structure moleculaire; Antiviral; Influenzavirus aviaire; Liaison hydrogene; Coefficient correlation; Prediction; Validation croisee; Relation structure activite; .; QSAR
Desc. génériques : Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 22446, INIST No. 354000142732140390

Origine de la notice : INIST

060434844
PASCAL

The Spanish influenza of 1918 in St. Louis, Missouri

Titre : The Spanish influenza of 1918 in St. Louis, Missouri

Auteur(s) : KALNINS Irene
Affiliation(s) : Saint Louis University School of Nursing, St. Louis, Missouri, United States

Source : Public health nursing Boston Mass. 2006; 23 (5) : 479-483
ISSN : 0737-1209
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 21 ref.

Résumé : In view of current concern about a possible pandemic of virulent avian influenza, it is timely to revisit the public health response to the "Spanish" influenza of 1918. St. Louis, Missouri, was the most successful of nine largest cities in limiting the death toll from influenza and pneumonia through the use of public health measures during the first 8 weeks of the epidemic. A second wave of cases increased the final death rate, but it remained below that of other major cities. Public health officials attributed the lower death rate to the early and rigorous ban on public gatherings.

Code(s) de classement : 002B30A11; 002B05C02C; 002B30A05

Descripteur(s) anglais
Descripteur(s) : Influenza; Spanish; Spain; Missouri; Nurse; Nursing; Professional practice; History; Antecedent; Case history; Public health
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Public health; Medical sciences; Viral disease; Infection; Europe; United States; North America; America
Descripteur(s) français
Descripteur(s) : Grippe; Espagnol; Espagne; Missouri; Infirmier; Nursing; Pratique professionnelle; Histoire; Antecedent; Historique; Sante publique
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Sante publique; Sciences medicales; Virose; Infection; Europe; Etats Unis; Amerique du Nord; Amerique
Localisation : INIST, Shelf number 22029, INIST No. 354000157135800100

Origine de la notice : INIST

060434756
PASCAL

Safety and immunogenicity of an inactivated adjuvanted whole-virion influenza A (H5N1) vaccine : a phase I randomised controlled trial. Commentary

Titre : Safety and immunogenicity of an inactivated adjuvanted whole-virion influenza A (H5N1) vaccine : a phase I randomised controlled trial. Commentary

Auteur(s) : STEPHENSON Join, comment; JIANGTAO LIN; JIANSAN ZHANG; XIAOPING DONG; HANHUA FANG; JIANGTING CHEN; NAN SU; QIANG GAO; ZHENSHAN ZHANG; YUXUAN LIU; ZHIHONG WANG; MENG YANG; RUIHUA SUN; CHANGGUI LI; SU LIN; MEI JI; YAN LIU; XU WANG; WOOD John; ZIJIAN FENG; YU WANG; WEIDONG YIN
Affiliation(s) : Infectious Diseases Unit, Leicester Royal Infirmary, Leicester LE15WW, United Kingdom; Chinese-Japanese Friendship Hospital, Beijing, China; Sinovac Biotech Co, Ltd, Beijing, China; State Key Laboratory for Infectious Disease Prevention and Control, National Institute for Viral Disease Control and Prevention, China; National Institute for the Control of Pharmaceuticals and Biological Products, Beijing, China; National Institute for Biological Standards and Control, Potters Bar, Hertfordshire, United Kingdom; Chinese Center for Disease Control and Prevention, Beijing, China

Source : Lancet British edition. 2006; 368 (9540) : 965-966,991-997 [9 p.]
ISSN : 0140-6736
CODEN : LANCAO
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Type de document : article; comments
Nombre de références : 40 ref.

Résumé : Background Avian influenza A virus H5N1 has caused widespread infections that have resulted in severe disease or death in poultry and wild birds as well as human beings. This virus has the potential to emerge as a pandemic threat and H5N1 vaccines are being developed in many countries. Our aim was to assess the safety and immunogenicity of an inactivated adjuvanted whole-virion H5N1 vaccine. Methods A stratified randomised, placebo-controlled, double-blind phase I clinical trial was done in 120 volunteers aged 18-60 years. Volunteers were assigned to receive two doses of placebo (n=24) or an inactivated whole-virion influenza A (H5N1) vaccine with 1.25 pg (24), 2.5 pg (24), 5 pg (24), or 10 pg (24) haemagglutinin per dose with aluminium hydroxide adjuvant on day 0 and 28. Serum samples were obtained on day 0, 14, 28, 42, and 56 for haemagglutination inhibition and virus neutralisation assays. This trial is registered with the ClinicalTrials.gov registry with the number NCT00356798. Findings All four formulations of vaccines were well tolerated. No serious adverse event was reported and most local and systemic reactions were mild and transient. All formulations induced antibody responses after the first dose; the highest immune response of 78% seropositivity was seen in the 10 pg group after two vaccine doses. Two individuals dropped out: one in the 1.25 pg group (withdrew consent) and one in the 10 pg group (discontinued); one individual was also excluded from the final analysis. Interpretation A two-dose regimen of an adjuvanted 10 pg inactivated whole-virion H5N1 vaccine met all European regulatory requirements for annual licensing of seasonal influenza vaccine. Lower doses of this vaccine could achieve immune responses equivalent to those elicited by adjuvanted or non-adjuvanted split-virion vaccines. The use of a whole virion vaccine could be more adaptable to the antigen-sparing strategy recommended by WHO for protection against an influenza pandemic.

Code(s) de classement : 002B01

Descripteur(s) anglais
Descripteur(s) : Immunoprophylaxis; Toxicity; Safety; Immunogenicity; Immune response; Adjuvant; Virion; Prevention; Vaccine; Vaccination; Phase I trial; Clinical trial; Critical study; Medicine; Influenzavirus AH5N1;

Randomised controlled trial
Desc. génériques : Medical sciences
Descripteur(s) français
Descripteur(s) : Immunoprophylaxie; Toxicite; Securite; Immunogenicite; Reponse immune; Adjuvant; Virion; Prevention; Vaccin; Vaccination; Essai clinique phase I; Essai clinique; Etude critique; Medecine; Influenzavirus AH5N1; Essai randomise controle
Desc. génériques : Sciences medicales
Localisation : INIST, Shelf number 5004, INIST No. 354000143591120140

Origine de la notice : INIST

060429185
PASCAL

Surveillance de la grippe aviaire chez l' Homme en France. Numero thematique. Les zoonoses en France

Titre : Surveillance de la grippe aviaire chez l' Homme en France. Numero thematique. Les zoonoses en France

Auteur(s) : BONMARIN I; LEVY BRUHL D
Auteur(s) : Institut de Veille Sanitaire INVS Saint Maurice, France; Institut de Veille Sanitaire INVS Departement des maladies infectieuses Saint Maurice, France
Source : BULLETIN EPIDEMIOLOGIQUE HEBDOMADAIRE. 2006-07-04; (27-28) : 208-
ISSN : 0245-7466
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Serial

Code(s) de classement : 002B30A11

Descripteur(s) anglais
Descripteur(s) : Epidemiology; Sanitary surveillance; Travel; Population; High risk; France
Desc. génériques : Public health; Medical sciences; Europe
Descripteur(s) français
Descripteur(s) : Epidemiologie; Surveillance sanitaire; Voyage; Population; Risque eleve; France; Institut veille sanitaire
Desc. génériques : Sante publique; Sciences medicales; Europe
Localisation : BDSP/InVS

Origine de la notice : BDSP

060429184
PASCAL

Surveillance des infections a influenzavirus chez les oiseaux en France. Numero thematique. Les zoonoses en France

Titre : Surveillance des infections a influenzavirus chez les oiseaux en France. Numero thematique. Les zoonoses en France

Auteur(s) : JESTIN V; SCHMITZ A; HARS J; CHERBONNEL M; LE GALL RECULE G; PICAULT JP; FRANCART J
Auteur(s) : Agence Francaise de Securite Sanitaire des Aliments AFSSA Ploufragan, France; Office national de la chasse et de la faune sauvage Gieres, France; Direction generale de l' alimentation Paris, France
Source : BULLETIN EPIDEMIOLOGIQUE HEBDOMADAIRE. 2006-07-04; (27-28) : 208-209
ISSN : 0245-7466
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : 4 ref.

Résumé : L' influenza aviaire est une infection des oiseaux (qu' ils soient sauvages, domestiques ou d' ornement) par des influenzavirus A. L' infection, quand elle s' exprime, se manifeste par un large eventail de signes cliniques variables selon l' hote (espece, age, statut sanitaire), la souche virale, les conditions environnementales. Neanmoins, aucun signe n' etant pathognomonique, un diagnostic de laboratoire est indispensable. Au plan de la virulence, les souches virales sont classees en deux categories : faiblement pathogenes (FP) et hautement pathogenes (HP) sur la base de criteres standardises internationaux. Au sein d' un vaste repertoire de sous-types connus, les virus influenza des oiseaux (AIV) HP ont ete associes a ce jour, a 2 exceptions pres, avec les seuls sous-types H5 et H7. Aussi, bien que l' immense majorite de ces derniers soit FP, tous les virus H5 et H7, en raison de leur propension a devenir HP apres mutation, font obligatoirement depuis 2002 l' objet d' une surveillance reguliere dans les Etats membres et sont maintenant soumis a declaration au plan international. En vue de detecter/confirmer a la fois les formes inapparentes et les formes plus ou moins cliniquement exprimees, quatre modalites de surveillance de l' influenza aviaire sont donc en place en France : - chez les volailles avec : un reseau d' epidemiovigilance clinique; des enquetes annuelles, au minimum serologiques; - dans l' avifaune sauvage avec une surveillance virologique : sur oiseaux captures ou tues a la chasse; lors de mortalites groupees (depuis septembre 2005). (Introduction)

Code(s) de classement : 002B30A11

Descripteur(s) anglais
Descripteur(s) : Surveillance; Zoonosis; Mortality; Virology; France
Desc. génériques : Public health; Medical sciences; Europe
Descripteur(s) français
Descripteur(s) : Surveillance; Zoonose; Mortalite; Virologie; France
Desc. génériques : Sante publique; Sciences medicales; Europe
Localisation : BDSP/InVS

Origine de la notice : BDSP

060428695
PASCAL

Les sentinelles de la vie. Le monde des vaccins

Titre : Les sentinelles de la vie. Le monde des vaccins

Auteur(s) : BERTRAND Jean Jacques; SALIOU Pierre; SEYTRE Bernard
Source : 2006; 219 p.; tabl.
Éditeur : Albin Michel, Paris
ISBN : 2226172637
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Book
Nombre de références : dissem.

Résumé : Les menaces sont nombreuses : pandemie de grippe aviaire, chikungunya, sida, SRAS, sans parler du bioterrorisme. Les fleaux font la une de l' actualite. Un espoir : la prevention par les vaccins. Mais l' industrie pharmaceutique est-elle prete a faire face aux pandemies annoncees ? Les decideurs ont-ils une reelle volonte de vacciner la planete ? Depuis les premieres inoculations des medecins chinois au Xe siecle, en passant par Jenner et Pasteur, jusqu' aux recherches actuelles qui explorent les ressources prodigieuses de la biologie moleculaire et preparent les vaccins de demain, les auteurs racontent la lutte contre les grandes epidemies et retracent l' histoire de la vaccination. Qu' est-ce qu' une maladie infectieuse ? Comment agissent les vaccins ? Pourquoi vacciner nos enfants contre la polio, le tetanos, la coqueluche et bien d' autres maladies ? Si ce livre apporte des reponses precises et nuancees a ces questions, il evoque egalement la monstrueuse injustice que represente la non-distribution des vaccins dans le monde : des millions d' enfants des pays en developpement meurent chaque annee de maladies que la vaccination systematique a fait disparaitre ailleurs. Face a ce bilan dramatique, de nouvelles actions sont entreprises entre institutions publiques et initiatives privees. Les espoirs sont donc reels pour que des sentinelles puissent enfin veiller sur la vie a travers le monde

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Vaccine; Vaccination; Policy; Case history; Immunology; Microorganism; Infection; Industrialized country; Developing countries; Pharmaceutical industry; Epidemic; Influenza
Desc. génériques : Public health; Medical sciences; Viral disease
Descripteur(s) français
Descripteur(s) : Vaccin; Vaccination; Politique; Historique; Immunologie; Microorganisme; Infection; Pays industrialise; Pays en developpement; Industrie pharmaceutique; Epidemie; Grippe
Desc. génériques : Sante publique; Sciences medicales; Virose
Localisation : BDSP/ENSP, Shelf number 153639, DM00/0065

Origine de la notice : BDSP

060428676
PASCAL

Agir face aux crises. Katrina, grippe aviaire, tsunami

Titre : Agir face aux crises. Katrina, grippe aviaire, tsunami

Auteur(s) : Groupe Solben, Unknown
Source : 2006; 111 p.
Éditeur : Plon, Paris
ISBN : 225920399X
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Book

Résumé : La reponse aux crises sanitaires, environnementales, financieres et internationales constitue aujourd' hui un enjeu majeur de gouvernance. Qu' il s' agisse de catastrophes naturelles - le Tsunami ou l' ouragan Katrina - de crises financieres - comme celle de l' Argentine - de conflits politico-securitaires a repercussion internationale - le conflit afghan - ou de menaces pour la sante publique - la grippe aviaire - responsables politiques et institutionnels doivent reussir a les gerer en confiance avec la societe civile et en coordination avec les autres gouvernements et les institutions internationales. L' internationalisation des crises et de leurs impacts expose de plus en plus les dirigeants nationaux et les organisations internationales au jugement de l' opinion publique. Cette derniere, grace a l' acceleration des moyens de communication et d' information, cherche de plus en plus les responsables des defaillances. C' est pourquoi cette progression soudaine de la notion de responsabilite de l' action publique a fait evoluer le concept de gouvernance : elle met au premier plan la capacite, individuelle et collective, a anticiper et a faire face aux crises de toutes natures. Cet ouvrage, elabore par le groupe "SOLBEN" compose de personnes ayant ou ayant eu des responsabilites operationnelles, s' appuie sur l' experience de situations reelles. Il a pour vocation de formuler des pistes de reflexion et d' action pour ameliorer la prevention et la gestion des crises en remettant en question certaines idees recues

Code(s) de classement : 002B30A11

Descripteur(s) anglais
Descripteur(s) : Crisis; Management; Environment; Natural disaster; Economic crisis; Europe; UNO; Responsibility; International cooperation; Afghanistan; France; Argentina; United States
Desc. génériques : Public health; Medical sciences; Asia; South America; America; North America
Descripteur(s) français
Descripteur(s) : Crise; Gestion; Environnement; Cataclysme; Crise economique; Europe; ONU; Responsabilite; Cooperation internationale; Afghanistan; France; Argentine; Etats Unis
Desc. génériques : Sante publique; Sciences medicales; Asie; Amerique du Sud; Amerique; Amerique du Nord
Localisation : BDSP/ENSP, Shelf number 152122, CA00/0373

Origine de la notice : BDSP

060454762
PASCAL

Emergency preparedness for pandemic influenza

Titre : Emergency preparedness for pandemic influenza

Auteur(s) : SCARFONE Richard J; ALEXANDER Sharon; COFFIN Susan E; JOHN Keith H St; SULLIVAN Frank; WAGNER Jacqueline; ZAOUTIS Theoklis
Affiliation(s) : University of Pennsylvania School of Medicine, Philadelphia PA, United States; Infection Prevention and Control Professional, Infection Prevention and Control Department, The Children's Hospital of Philadelphia, Philadelphia, PA, United States; Infection Prevention/Control and Occupational Health, The Children's Hospital of Philadelphia, Philadelphia, PA, United States; Emergency Preparedness Program, The Children's Hospital of Philadelphia, Philadelphia, PA, United States; Environmental Health and Safety, The Children's Hospital of Philadelphia, Philadelphia, PA, United States

Source : Pediatric emergency care. 2006; 22 (9) : 661-668
ISSN : 0749-5161
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 32 ref.

Code(s) de classement : 002B27B; 002B27B14C; 002B27B15

Descripteur(s) anglais
Descripteur(s) : Resuscitation; Intensive care; Child; Emergency; Influenza
Desc. génériques : Resuscitation; Intensive care medicine; Medical sciences; Resuscitation; Intensive care medicine; Medical sciences; Resuscitation; Intensive care medicine; Medical sciences; Human; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Reanimation; Soin intensif; Enfant; Urgence; Grippe
Desc. génériques : Reanimation; Soins intensifs; Sciences medicales; Reanimation; Soins intensifs; Sciences medicales; Reanimation; Soins intensifs; Sciences medicales; Homme; Virose; Infection
Localisation : INIST, Shelf number 20958, INIST No. 354000157191240130

Origine de la notice : INIST

060450100
PASCAL

Development of an internal positive control for rapid diagnosis of avian influenza virus infections by real-time reverse transcription-PCR with lyophilized reagents

Titre : Development of an internal positive control for rapid diagnosis of avian influenza virus infections by real-time reverse transcription-PCR with lyophilized reagents

Auteur(s) : DAS Amaresh; SPACKMAN Erica; SENNE Dennis; PEDERSEN Jan; SUAREZ David L
Affiliation(s) : Southeast Poultry Research Laboratory, Agricultural Research Service, USDA, 934 College Station Rd, Athens, Georgia 30605, United States; National Veterinary Services Laboratories, Veterinary Services, Animal and Plant Health Inspection Service, USDA, 1800 Dayton Ave, Ames, Iowa 50010, United States

Source : Journal of clinical microbiology Print. 2006; 44 (9) : 3065-3073
ISSN : 0095-1137
CODEN : JCMIDW
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 41 ref.

Résumé : We developed an internal positive control (IPC) RNA to help ensure the accuracy of the detection of avian influenza virus (AIV) RNA by reverse transcription (RT)-PCR and real-time RT-PCR (RRT-PCR). The IPC was designed to have the same binding sites for the forward and reverse primers of the AIV matrix gene as the target amplicon, but it had a unique internal sequence used for the probe site. The amplification of the viral RNA and the IPC by RRT-PCR were monitored with two different fluorescent probes in a multiplex format, one specific for the AIV matrix gene and the other for the IPC. The RRT-PCR test was further simplified with the use of lyophilized bead reagents for the detection of AIV RNA. The RRT-PCR with the bead reagents was more sensitive than the conventional wet reagents for the detection of AIV RNA. The IPC-based RRT-PCR detected inhibitors in blood, kidney, lungs, spleen, intestine, and cloacal swabs, but not allantoic fluid, serum, or tracheal swabs The accuracy of RRT-PCR test results with the lyophilized beads was tested on cloacal and tracheal swabs from experimental birds inoculated with AIV and compared with virus isolation (VI) on embryonating chicken eggs. There was 97 to 100% agreement of the RRT-PCR test results with VI for tracheal swabs and 81% agreement with VI for cloacal swabs, indicating a high level of accuracy of the RRT-PCR assay. The same IPC in the form of armored RNA was also used to monitor the extraction of viral RNA and subsequent detection by RRT-PCR.

Code(s) de classement : 002A05C10; 002B05

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Diagnosis; Real time; Reverse transcription polymerase chain reaction; Microbiology
Desc. génériques : Virology; Microbiology; Biological sciences; Infectious diseases; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Diagnostic; Temps reel; Reaction chaine polymerase RT; Microbiologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 17088, INIST No. 354000157105450020

Origine de la notice : INIST

060441463
PASCAL

Noninvasive positive-pressure ventilation : An experimental model to assess air and particle dispersion

Titre : Noninvasive positive-pressure ventilation : An experimental model to assess air and particle dispersion

Auteur(s) : HUI David S; HALL Stephen D; CHAN Matthew T V; CHOW Benny K; TSOU Jin Y; JOYNT Gavin M; SULLIVAN Colin E; SUNG Joseph J Y
Affiliation(s) : Departments of Medicine and Therapeutics, The Chinese University of Hong Kong, Hong Kong; School of Mechanical Engineering, The University of New South Wales, Sydney, NSW, Australia; Department of Anesthesia and Intensive Care, The Chinese University of Hong Kong, Hong Kong; Department of Architecture, The Chinese University of Hong Kong, Hong Kong; Department of Medicine, The University of Sydney, NSW, Australia

Source : Chest . 2006; 130 (3) : 730-740
ISSN : 0012-3692
CODEN : CHETBF
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 45 ref.

Résumé : Background: Health-care workers are concerned about the risk of acquiring contagious diseases such as severe acute respiratory syndrome and avian influenza after recent outbreaks. We studied exhaled air and particle dispersion through an oronasal mask attached to a human-patient simulator (HPS) during noninvasive positive-pressure ventilation (NPPV). Methods: Airflow was marked with intrapulmonary smoke for visualization. Therapy with inspiratory positive airway pressure (IPAP) was started at 10 cm H<sub>2O and gradually increased to 18 cm H<sub>2O, whereas expiratory positive airway pressure was maintained at 4 cm H<sub>2O. A leakage jet plume was revealed by a laser light sheet and images captured by video. Smoke concentration in the plume was estimated from the light scattered by smoke particles. Findings: A jet plume of air leaked through the mask exhaust holes to a radial distance of 0.25 m from the mask during the application of IPAP at 10 cm H<sub>2O with some leakage from the nasal bridge. The leakage plume exposure probability was highest about 60 to 80 mm lateral to the median sagittal plane of the HPS. Without nasal bridge leakage, the jet plume from the exhaust holes increased to a 0.40-m radius from the mask, whereas exposure probability was highest about 0.28 m above the patient. When IPAP was increased to 18 cm H<sub>2O, the vertical plume extended to 0.45 m above the patient with some horizontal spreading along the ward ceiling. Conclusion: Substantial exposure to exhaled air occurs within a 0.5-m radius of patients receiving NPPV. Medical wards should be designed with an architectural aerodynamics approach and knowledge of air/particle dispersion from common mechanical ventilatory techniques.

Code(s) de classement : 002B11; 002B12; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza; Cardiovascular disease; Respiratory disease; Positive pressure; Artificial ventilation; Mechanical ventilation; Experimental study; Models; Air; Particle; Dispersion
Desc. génériques : Pneumology; Respiratory system; Medical sciences; Cardiovascular system; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe; Appareil circulatoire pathologie; Appareil respiratoire pathologie; Pression positive; Ventilation artificielle; Ventilation mecanique; Etude experimentale; Modele; Air; Particule; Dispersion
Desc. génériques : Pneumologie; Appareil respiratoire; Sciences medicales; Systeme cardiovasculaire; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 7627, INIST No. 354000142885350140

060439851
PASCAL

Genetic immunityand influenza pandemics

Titre : Genetic immunityand influenza pandemics

Auteur(s) : RUMYANTSEV Sergey N
Affiliation(s) : Andent Inc, Waukegan, IL, United States

Source : FEMS immunology and medical microbiology. 2006; 48 (1) : 1-10
ISSN : 0928-8244
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 31 ref.

Résumé : In addition to the great number of publications focused on the leading role of virus mutations and reassortment in the origin of pandemic influenza, general opinion emphasizes the victim side of the epidemic process. Based on the analysis and integration of relevant ecological, epidemiological, clinical, genetic and experimental data, the present article is focused on the evolution of 'virus - victim' ecological systems resulting in the formation of innate (i.e. genetic, constitutional) immunity in the involved species and populations. This kind of immunity functions today as the greatest natural barrier to the pandemic spread of influenza among humans and ecologically related kinds of animals. Global influenza pandemics can arise when the worldwide population contains at least a minimum number of people susceptible to a known or mutant influenza virus. Special attention is paid in this article to individual tests for the presence of this barrier, including the implications of specific findings for public health policy. Such tests could be based on in vitro observation of the action of relevant virus strains on primary cell cultures or on their cellular or molecular components extracted from individuals. The resources of the Human Genome Project should also be utilized.

Code(s) de classement : 002A05

Descripteur(s) anglais
Descripteur(s) : Genetics; Public health; Microbiology; Immunology; Influenza
Desc. génériques : Microbiology; Biological sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Genetique; Sante publique; Microbiologie; Immunologie; Grippe
Desc. génériques : Microbiologie; Sciences biologiques; Virose; Infection
Localisation : INIST, Shelf number 17567B, INIST No. 354000142227570010

Origine de la notice : INIST

060439466
PASCAL

Structure and receptor specificity of the hemagglutinin from an H5N1 influenza virus

Titre : Structure and receptor specificity of the hemagglutinin from an H5N1 influenza virus

Auteur(s) : STEVENS James; BLIXT Ola; TUMPEY Terrence M; TAUBENBERGER Jeffery K; PAULSON James C; WILSON Ian A
Affiliation(s) : Department of Molecular Biology, The Scripps Research Institute, 10550 North Torrey Pines Road, La jolla, CA 92037, United States; Glycan Array Synthesis Core-D, Consortium for Functional Glycomics, The Scripps Research Institute, 10550 North Torrey Pines Road, La jolla, CA 92037, United States; Influenza Branch, Division of Viral and Rickettsial Diseases, Centers for Disease Control and Prevention, Atlanta, GA 30333, United States; Department of Molecular Pathology, Armed Forces Institute of Pathology, Rockville, MD 20306, United States; Skaggs Institute for Chemical Biology, The Scripps Research Institute, 10550 North Torrey Pines Road, La jolla, CA 92037, United States

Source : Science Washington DC. 2006; 312 (5772) : 404-410
ISSN : 0036-8075
CODEN : SCIEAS
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Notes : 3/4 p. ref. et notes

Résumé : The hemagglutinin (HA) structure at 2.9 angstrom resolution, from a highly pathogenic Vietnamese H5N1 influenza virus, is more related to the 1918 and other human H1 HAs than to a 1997 duck H5 HA. Glycan microarray analysis of this Viet04 HA reveals an avian a2-3 sialic acid receptor binding preference. Introduction of mutations that can convert H1 serotype HAs to human a2-6 receptor specificity only enhanced or reduced affinity for avian-type receptors. However, mutations that can convert avian H2 and H3 HAs to human receptor specificity, when inserted onto the Viet04 H5 HA framework, permitted binding to a natural human a2-6 glycan, which suggests a path for this H5N1 virus to gain a foothold in the human population.

Code(s) de classement : 002B05C02C; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Influenzavirus A; Subtype; Avian influenzavirus; Molecular structure; Hemagglutinin; Mutation; Biological receptor; Human; Species specificity
Desc. génériques : Virology; Infectious diseases; Medical sciences; Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus A; Soustype; Influenzavirus aviaire; Structure moleculaire; Hemagglutinine; Mutation; Recepteur biologique; Homme; Specificite espece; Virus H5N1
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 6040, INIST No. 354000142715070190

Origine de la notice : INIST

060439465
PASCAL

H5N1 virus attachment to lower respiratory tract

Titre : H5N1 virus attachment to lower respiratory tract

Auteur(s) : VAN RIEL Debby; MUNSTER Vincent J; DE WIT Emmie; RIMMELZWAAN Guus F; FOUCHIER Ron A M; OSTERHAUS Ab D M E; KUIKEN Thijs
Affiliation(s) : Department of Virology, Erasmus Medical Center, 3015 GE Rotterdam, Netherlands

Source : Science Washington DC. 2006; 312 (5772) : p. 399
ISSN : 0036-8075
CODEN : SCIEAS
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Notes : 1/4 p. ref. et notes

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenzavirus A; Subtype; Pathogenesis; Human; Animal; Comparative study; Respiratory tract; Trachea; Pulmonary alveolus; Respiratory disease; Avian influenzavirus
Desc. génériques : Virology; Infectious diseases; Medical sciences; Orthomyxoviridae; Virus; Respiratory system
Descripteur(s) français
Descripteur(s) : Influenzavirus A; Soustype; Pathogenie; Homme; Animal; Etude comparative; Voie respiratoire; Trachee; Alveole pulmonaire; Appareil respiratoire pathologie; Influenzavirus aviaire; Virus H5N1
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Orthomyxoviridae; Virus; Appareil respiratoire
Localisation : INIST, Shelf number 6040, INIST No. 354000142715070170

Origine de la notice : INIST

060439464
PASCAL

Host species barriers to influenza virus infections

Titre : Host species barriers to influenza virus infections

Auteur(s) : KUIKEN Thijs; HOLMES Edward C; MCCAULEY John; RIMMELZWAAN Guus F; WILLIAMS Catherine S; GRENFELL Bryan T
Affiliation(s) : Department of Virology, Erasmus Medical Center, 3015 GE Rotterdam, Netherlands; Center for Infectious Disease Dynamics, Department of Biology, Pennsylvania State University, University Park, PA 16802, United States; Institute for Animal Health, Compton Laboratory, Compton, Newbury, Berkshire RG20 7NN, United Kingdom; Fogarty International Center, National Institutes of Health, Bethesda, MD 20892, United States

Source : Science Washington DC. 2006; 312 (5772) : 394-397
ISSN : 0036-8075
CODEN : SCIEAS
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Notes : 1/4 p. ref. et notes

Résumé : Most emerging infectious diseases in humans originate from animal reservoirs; to contain and eradicate these diseases we need to understand how and why some pathogens become capable of crossing host species barriers. influenza virus illustrates the interaction of factors that limit the transmission and subsequent establishment of an infection in a novel host species. Influenza species barriers can be categorized into virus-host interactions occurring within individuals and host-host interactions, either within or between species, that affect transmission between individuals. Viral evolution can help surmount species barriers, principally by affecting virus-host interactions; however, evolving the capability for sustained transmission in a new host species represents a major adaptive challenge because the number of mutations required is often large.

Code(s) de classement : 002A05C04; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Transmission from animal to man; Host virus relation; Host specificity; Epidemic; Evolution; Adaptation; Mutation; Human; Review
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Infectious diseases; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Transmission animal homme; Relation hote virus; Specificite hote; Epidemie; Evolution; Adaptation; Mutation; Homme; Article synthese; Barriere des especes
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Maladies infectieuses; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 6040, INIST No. 354000142715070160

Origine de la notice : INIST

060439463
PASCAL

Predictability and preparedness in influenza control

Titre : Predictability and preparedness in influenza control

Auteur(s) : SMITH Derek J
Source : Science Washington DC. 2006; 312 (5772) : 392-394
ISSN : 0036-8075
CODEN : SCIEAS
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Notes : 1/4 p. ref. et notes

Résumé : The threat of pandemic human influenza looms as we survey the ongoing avian influenza pandemic and wonder if and when it will jump species. What are the risks and how can we plan? The nub of the problem lies in the inherent variability of the virus, which makes prediction difficult. However, it is not impossible; mathematical models can help determine and quantify critical parameters and thresholds in the relationships of those parameters, even if the relationships are nonlinear and obscure to simple reasoning. Mathematical models can derive estimates for the levels of drug stockpiles needed to buy time, how and when to modify vaccines, whom to target with vaccines and drugs, and when to enforce quarantine measures. Regardless, the models used for pandemic planning must be tested, and for this we must continue to gather data, not just for exceptional scenarios but also for seasonal influenza.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza; Public health; Transmission from man to man; Epidemic; Evaluation; Risk; Prediction; Mathematical model; Evolution; Thailand; Influenzavirus; Influenzavirus A; Human
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Asia; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Grippe; Sante publique; Transmission homme homme; Epidemie; Evaluation; Risque; Prediction; Modele mathematique; Evolution; Thailande; Influenzavirus; Influenzavirus A; Homme; Pandemie
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Asie; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 6040, INIST No. 354000142715070150

Origine de la notice : INIST

060476985
PASCAL

Les pandemies dans l' histoire depuis le Veme siecle av. J. - C

Titre : Les pandemies dans l' histoire depuis le Veme siecle av. J. - C

Auteur(s) : ZAJDENWEBER Daniel; MARTIN Pierre; MOUTON Francois; SEGOVIA KUENY Sandrine; GIN Stephane; LAVAUX Magalie; BEAUCHENE Vinciane; CHOW KOO Roseline; DIAZ Jean Pierre
Source : RISQUES . 2006-06; (66) : 21-57; tabl.
ISSN : 1152-9253
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : dissem.

Résumé : Sommaire du dossier : Les pandemies dans l' Histoire - De panzootie a pandemie - Les pouvoirs publics face a la pandemie - Couverture du risque mortalite du betail : le role des pouvoirs publics, l' intervention de l' assureur - Pandemie de grippe aviaire : les entreprises sont-elles pretes ? - Impact d' une pandemie de grippe d' origine aviaire sur les assureurs de personnes

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Contagion; Communicable disease; Epidemic; History; Health; Epidemiology; Sanitary surveillance; Civil service; Responsibility; Insurance; Private sector; France; Epizootics; Spongiform encephalopathy; Risk management
Desc. génériques : Public health; Medical sciences; Europe; Prion disease; Infection
Descripteur(s) français
Descripteur(s) : Contagion; Maladie contagieuse; Epidemie; Histoire; Sante; Epidemiologie; Surveillance sanitaire; Administration publique; Responsabilite; Assurance; Secteur prive; France; Epizootie; Encephalopathie spongiforme; Gestion risque
Desc. génériques : Sante publique; Sciences medicales; Europe; Prion maladie; Infection
Localisation : BDSP/ENSP, Shelf number 155105

Origine de la notice : BDSP

060476900
PASCAL

Rapport fait au nom de la mission d' information sur la grippe aviaire : mesures preventives. Tome 3. Plan pandemie : une strategie de gestion de crise

Titre : Rapport fait au nom de la mission d' information sur la grippe aviaire : mesures preventives. Tome 3. Plan pandemie : une strategie de gestion de crise

Auteur(s) : LE GUEN Jean Marie; DOOR Jean Pierre, rapp
Auteur(s) : Assemblee Nationale Paris, France
Source : 2006 01 26; 581 p.; pdf
Éditeur : Assemblee Nationale, Paris
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Book

Résumé : Apres deux rapports, l' un consacre aux moyens medicaux disponibles en cas de pandemie, l' autre relatif a l' etendue de l' epizootie de grippe aviaire dans le monde et en France, la mission d' information sur la grippe aviaire constituee en octobre 2005 publie un troisieme rapport dedie plus particulierement a l' evaluation du plan gouvernemental de preparation a la pandemie. Ce plan gouvernemental de prevention et de lutte "pandemie grippale" dont la France s' est dotee s' inscrit dans la ligne de plans anterieurs, eux-memes inspires d' un plan mondial OMS de preparation a une pandemie de grippe publie en 1999 et mis a jour en 2005. Il propose une strategie generale qui consiste a faire fonctionner l' Etat et la societe en "mode degrade" jusqu' a la mise au point d' un vaccin, afin de freiner la propagation du virus. La premiere partie du rapport, apres avoir rappele l' historique du plan francais, expose les orientations generales du plan gouvernemental et presente les mesures qui devront etre mises en oeuvre : organisation d' un dispositif de gestion de crise a l' echelon national ou local, deploiement de "mesures barrieres" susceptibles de reduire le risque de contagion tels que masques respiratoires et medicaments antiviraux, et enfin, preservation de la continuite des services indispensables a la population comme les transports collectifs ou l' enseignement. La seconde partie du rapport aborde l' organisation du systeme de sante en periode pre-pandemique, puis en phase pandemique, avec un eclairage particulier sur le role de l' hopital tout au long de la crise et une contribution de Mme Berengere Poletti, membre de la mission, sur la telemedecine. L' auteur y met en evidence les avantages d' un recours plus grand aux nouvelles technologies dans la perspective d' une pandemie. Le rapport se termine par une liste de recommandations concernant six points : les structures administratives de gestion de crise, les collectivites territoriales, l' InVS, l' information de la population et l' aide aux malades soignes a domicile, la medecine de ville et les structures hospitalieres

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Influenza; Vector; Animal; Plane; Case history; Antiviral; Protection safety equipment; Individual safety equipment; Vaccine; Service; Transport; Teaching; Firm; Economic sector; Epidemiology; Sanitary surveillance; Hospitalization; Hospital; Organization; Emergency; Hospital environment; Health staff; General practitioner; Resuscitation; Balance; Proposition; Prevention; Health; France; Epizootics; Risk management; Telemedicine
Desc. génériques : Public health; Medical sciences; Viral disease; Infection; Europe
Descripteur(s) français
Descripteur(s) : Grippe; Vecteur; Animal; Plan; Historique; Antiviral; Equipement protection securite; Protection individuelle; Vaccin; Service; Transport; Enseignement; Entreprise; Secteur economique; Epidemiologie; Surveillance sanitaire; Hospitalisation; Hopital; Organisation; Urgence; Milieu hospitalier; Personnel sanitaire; Medecin generaliste; Reanimation; Bilan; Proposition; Prevention; Sante; France; Epizootie; Gestion risque; Telemedecine
Desc. génériques : Sante publique; Sciences medicales; Virose; Infection; Europe
Localisation : BDSP/ENSP, Shelf number 154729

Origine de la notice : BDSP

060476790
PASCAL

La gestion de la grippe aviaire

Titre : La gestion de la grippe aviaire

Auteur(s) : BRICQ Nicole, rapp
Auteur(s) : Senat Paris, France
Source : 2006 07 04; 130 p.; pdf, ann.
Éditeur : Senat, Paris
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Book

Résumé : Au nom de la commission des finances du Senat et en application de l' article 57 de la LOLF, Nicole BRICQ, rapporteure speciale de la mission "securite sanitaire" a conduit, au cours du premier semestre de l' annee 2006, une mission de controle sur la mise en oeuvre des mesures de lutte contre la grippe aviaire. Apres avoir procede a de nombreuses auditions et deplacements dans des departements francais, elle fait part de ses observations dans ce rapport. Dans une premiere partie, elle estime que le dispositif national de lutte qui comprend deux volets, un volet relatif a l' influenza aviaire et un volet relatif a la pandemie humaine, peut etre considere comme globalement efficace malgre certains points faibles qui devront etre corriges : difficultes liees a la surveillance et au recensement des basses-cours familiales, nombre de laboratoires de criblage sur le territoire ou probleme de formation des veterinaires en ce qui concerne le premier volet, faible association des medecins liberaux, limite des capacites hospitalieres nationales ou inegale mobilisation des services deconcentres et des collectivites territoriales s' agissant du deuxieme volet. Elle met egalement en avant une architecture administrative generale inadaptee et peu structuree ainsi qu' un financement initial sous evalue et manquant de lisibilite a plusieurs niveaux. Puis, s' interessant aux enjeux majeurs, la rapporteure speciale estime que la dimension internationale de la crise de grippe aviaire est un element essentiel de sa gestion et doit etre pleinement prise en compte au niveau national. Elle appelle donc, dans une deuxieme partie, a un renforcement de la cooperation europeenne dans le domaine de la sante humaine et a une prise en compte coordonnee, a l' echelle mondiale, de la situation des pays les plus exposes. Enfin, en conclusion, la rapporteure estime qu' il faut se preparer a vivre avec un risque durable, au niveau national et international. La durabilite de ce risque impose de reflechir a l' evolution du dispositif mis en place et a l' emergence d' une gouvernance mondiale de la securite sanitaire

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Influenza; Vector; Animal; Plane; Rearing; Veterinary center; Epidemiology; Sanitary surveillance; Risk analysis; Vaccination; Ministry; Financing; Cooperation; Europe; International cooperation; Developing countries; Balance; Proposition; France; Epizootics; Risk management
Desc. génériques : Public health; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe; Vecteur; Animal; Plan; Elevage; Centre veterinaire; Epidemiologie; Surveillance sanitaire; Analyse risque; Vaccination; Ministere; Financement; Cooperation; Europe; Cooperation internationale; Pays en developpement; Bilan; Proposition; France; Epizootie; Gestion risque; Agence francaise de securite sanitaire des aliments
Desc. génériques : Sante publique; Sciences medicales; Virose; Infection
Localisation : BDSP/ENSP, Shelf number 154533

Origine de la notice : BDSP

060475942
PASCAL

Infections virales emergentes. Discussion : Les zoonoses, passe, present et avenir; Emerging viral diseases. Discussion

Titre : Infections virales emergentes. Discussion : Les zoonoses, passe, present et avenir; Emerging viral diseases. Discussion

Auteur(s) : BRICAIRE Francois; BOSSI Philippe; PENE M Pierre; TUBIANA M Maurice
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Source : Bulletin de l'Academie nationale de medecine. 2006; 190 (3) : 597-609
ISSN : 0001-4079
CODEN : BANMAC
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Langue(s) du résumé : English
Type de document : Serial
Type de document : article; comments
Nombre de références : 24 ref.

Résumé : Les infections emergentes ou reemergentes sont depuis quelques annees revenues dans l' actualite. Plusieurs raisons y concourent: outre des faits tenant a nos habitudes de vie, a des modifications ecologiques, et a des faits socio-politiques, des possibilites techniques actuelles permettent de mieux diagnostiquer ou mettre en evidence des agents infectieux. Ces faits s' expriment a travers de nombreux pathogenes, essentiellement des virus de divers types: le virus West Nile, le virus Chikungunya et en expansion le virus de l' encephalite japonaise. On peut insister sur les virus responsables des fievres hemorragiques virales representes surtout par les virus Ebola et Maburg. Plus recemment, a pu etre isole le Coronavirus responsable du SRAS, infection ayant provoque une epidemie qui a suffisamment inquiete pour modifier les mentalites et le concept de prise en charge des epidemies. C' est dans cet esprit que la grippe aviaire, phenomene animal, fait craindre et annoncer une future pandemie avec un virus adapte a l' homme. Doivent etre mis a part la variole et le Monkeypox qui sont des virus virtuellement emergents dans le cadre d' un eventuel acte bioterroriste. La prise en charge de ces infections emergentes justifie reflexions et organisation d' un certain nombre de structures pour repondre au mieux aux exigences actuelles de notre societe.

Code(s) de classement : 002B30A11; 002B05C02C; 002B05C02B

Descripteur(s) anglais
Descripteur(s) : Viral disease; Discussion; Arbovirus; Emerging disease; Severe acute respiratory syndrome; Bioterrorism; Influenza; Medicine; Human; Hemorrhagic fever; Review; Smallpox; Monkey pox; Chikungunya virus; Japanese encephalitis virus; Reemerging disease
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Virology; Infectious diseases; Medical sciences; Infection; Virus; Arbovirus disease; Alphavirus; Togaviridae; Japanese encephalitis group virus; Flavivirus; Flaviviridae; Respiratory disease; Lung disease; Skin disease
Descripteur(s) français
Descripteur(s) : Virose; Discussion; Arbovirus; Maladie emergente; Syndrome respiratoire aigu severe; Bioterrorisme; Grippe; Medecine; Homme; Fievre hemorragique; Article synthese; Variole; Variole singe; Virus Chikungunya; Virus encephalite japonaise; Maladie reemergente
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Infection; Virus; Arbovirose; Alphavirus; Togaviridae; Virus groupe encephalite japonaise; Flavivirus; Flaviviridae; Appareil respiratoire pathologie; Poumon pathologie; Peau pathologie
Localisation : INIST, Shelf number 740, INIST No. 354000157159810030

060471369
PASCAL

A global pandemic influenza vaccine action plan

Titre : A global pandemic influenza vaccine action plan

Auteur(s) : KIENY Marie Paule; COSTA Alejandro; HOMBACH Joachim; CARRASCO Peter; PERVIKOV Yuri; SALISBURY David; GRECO Michel; GUST Ian; LAFORCE Marc; FRANCO PAREDES Carlos; SANTOS Jose Ignacio; D' HONDT Eric; RIMMELZWAAN Guus; KARRON Ruth; FUKUDA Keiji
Affiliation(s) : World Health Organization, Geneva, Switzerland; Department of Health, London, United Kingdom; Department of Microbiology and Immunology, Melbourne, Australia; PATH, Ferney, France; Hospital Infantil, Mexico, Mexico; Rupelmondestraat 166, Bazel, Belgium; Erasmus Medical Center, Rotterdam, Netherlands; John Hopkins Bloomberg School of Public Health, Baltimore, United States

Source : Vaccine . 2006; 24 (40-41) : 6367-6370
ISSN : 0264-410X
CODEN : VACCDE
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 3 ref.

Résumé : In case of an influenza pandemic, the world will be in a situation where potential vaccine supply will fall short by several billion doses from global needs. The World Health Organization (WHO) convened in Geneva on May 2-3, 2006 a consultation of all stakeholders in influenza vaccines and immunization to identify practical solutions to fill this gap. The consultation resulted in a global action plan outlining promising specific strategies to increase influenza vaccine production and surge-capacity before and during an influenza pandemic. Although the timing and severity of the next influenza pandemic cannot be predicted, vaccines are considered the one of the most important medical interventions for reducing morbidity and mortality if and when such an event occurs. Despite this acknowledged role, current limitations on influenza vaccine manufacturing capacity mean that, should a pandemic virus emerge in the near future, vaccine supplies would fall short of the anticipated global demand by several billion doses. Concern about this situation was formally acknowledged in May 2005, when the World Health Assembly approved a resolution [1] on strengthening pandemic influenza preparedness and response. That resolution called on the World Health Organization (WHO) to seek solutions with international and national partners, including the private sector, to reduce the present global shortage of influenza vaccines. More specifically, the resolution asked WHO to look at strategies for economizing on the use of antigen and transferring production technologies from industrialized to developing countries. In response to this request, WHO convened a consultation from 2-3 May 2006 attended by representatives of the major stakeholders in the area of influenza vaccines and immunization. The consultation had two main objectives: (1) To prepare a global action plan with specific short-, medium-, and long-term activities designed to increase influenza vaccine production and surge-capacity, to identify key obstacles and driving forces, and to estimate funding needs. (2) To strengthen the engagement and collaboration of key partners and stakeholders.

Code(s) de classement : 002A05F04

Descripteur(s) anglais
Descripteur(s) : Vaccine; Immunization; Influenza A
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Vaccin; Immunisation; Grippe A
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Virose; Infection
Localisation : INIST, Shelf number 20289, INIST No. 354000157170860010

060471300
PASCAL

Genotype turnover by reassortment of replication complex genes from avian Influenza A virus

Titre : Genotype turnover by reassortment of replication complex genes from avian Influenza A virus

Auteur(s) : MACKEN Catherine A; WEBBY Richard J; BRUNO William J
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Source : Journal of general virology. 2006; 87 (p.10) : 2803-2815
ISSN : 0022-1317
CODEN : JGVIAY
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 29 ref.

Résumé : Reassortment among the RNA segments of Influenza A virus caused the two most recent human influenza pandemics; recently, reassortment has generated viral genotypes associated with outbreaks of avian H5N1 influenza in Asia and Europe. A statistical analysis has been developed for the systematic identification and characterization of reassortant viruses. The analysis was applied to the genes of the replication complex of 152 avian influenza A viruses isolated between 1966 and 2004 from predominantly terrestrial and domestic aquatic avian species. The results indicated that reassortment among these genes was pervasive throughout this period and throughout both the Eurasian and North American lineages of the virus. Evidence is presented that the circulating genotypes of the replication complex are being replaced continually by novel genotypes created by reassortment. No constraints for coordinated reassortment among genes of the replication complex were evident; rather, reassortment almost always proceeded one segment at a time. A maximum-likelihood estimate of the rate of reassortment was derived. For significantly diverged Asian avian influenza A viruses from the period 1991-2004, it was estimated that the median duration between creation of a new genotype and its next segment reassortment was 3 years. Reassortments that introduced previously unobserved influenza genetic material were detected. These findings point to substantial potential for rapid generation of novel avian influenza A viruses, emphasizing the importance of intensive surveillance of these host species in preparation for a possible pandemic.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Influenza A virus; Genotype; Turnover; Replication; Gene; Microbiology; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Virus grippal A; Genotype; Turnover; Replication; Gene; Microbiologie; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13533, INIST No. 354000142921150050

Origine de la notice : INIST

060463494
PASCAL

Genetic characterization of the H9N2 influenza viruses circulated in the poultry population in Israel

Titre : Genetic characterization of the H9N2 influenza viruses circulated in the poultry population in Israel

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Source : Comparative immunology microbiology and infectious diseases. 2006; 29 (4) : 207-223
ISSN : 0147-9571
CODEN : CIMIDV
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 34 ref.

Résumé : The partial nucleotide sequences of the hemagglutinin (HA) genes of 72 H9N2 influenza viruses isolated from chickens and turkeys in Israel during the period 2000-2005 were genetically analyzed. The isolates possessed the three types of amino acid motif -R-S-S-R/ G-L-, -R-S-N-R/G-L-, and -R-S-K-R/G-L- at the cleavage site of HA. Phylogenetic analyses showed that all Israeli isolates belonged to the same group which further divided into three closely related sub-groups. The HA genes of these isolates were related to the HA gene of A/chicken/Germany/R45/98 isolated from chicken in Germany in 1998.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Genetics; Poultry; Israel; Subtype; Hemagglutinin; Gene; Cleavage site; Phylogeny; Influenza; Microbiology; Immunology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Asia; Farming animal; Viral disease; Infection; Veterinary
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Genetique; Volaille; Israel; Soustype; Hemagglutinine; Gene; Site clivage; Phylogenese; Grippe; Microbiologie; Immunologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Asie; Animal elevage; Virose; Infection; Veterinaire
Localisation : INIST, Shelf number 16817, INIST No. 354000152256350030

Origine de la notice : INIST

060463378
PASCAL

Grippe aviaire : les medecins du travail impliques : De la grippe saisonniere au risque de pandemie

Titre : Grippe aviaire : les medecins du travail impliques : De la grippe saisonniere au risque de pandemie

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Source : Concours medical Paris. 2006; 128 (31-32) : 1322-1324
ISSN : 0010-5309
CODEN : COMEAO
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : 9 ref.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Physician; Public health; Work; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Medecin; Sante publique; Travail; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales
Localisation : INIST, Shelf number 10949, INIST No. 354000139308220090

Origine de la notice : INIST

060461397
PASCAL

Virus respiratoires emergents : virus du sras et virus influenza A/H5N1 hautement pathogene; Emergent viruses : SARS-associated coronavirus and H5N1 influenza virus

Titre : Virus respiratoires emergents : virus du sras et virus influenza A/H5N1 hautement pathogene; Emergent viruses : SARS-associated coronavirus and H5N1 influenza virus

Auteur(s) : GOFFARD A; LAZREK M; SCHANEN C; LOBERT P E; BOCKET L; DEWILDE A; HOBER D
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Source : Annales de biologie clinique Paris. 2006; 64 (3) : 195-208
ISSN : 0003-3898
CODEN : ABCLAI
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Langue(s) du résumé : English
Type de document : Serial
Nombre de références : 30 ref.

Résumé : Cette synthese a pour but de faire le point des connaissances concernant le virus du syndrome respiratoire aigu severe (Sras) et le virus A/H5N1 hautement pathogene. En cas de suspicion d' infection par SARS-CoV, les recherches virologiques sont realisees a partir d' une aspiration rhinopharyngee, d' une expectoration, d' un ecouvillonnage de gorge ou d' un liquide de lavage broncho-alveolaire (LBA) mais aussi des selles, des urines voire du serum d' un patient venant d' une region ou le virus du Sras aurait reemerge (ou travaillant dans un laboratoire etudiant le virus du Sras). L' isolement du virus sur culture cellulaire ou l' extraction de l' ARN viral en vue d' une RT-PCR doivent etre realises dans un laboratoire de niveau de confinement BSL3 (Biosafety level 3). Une RT-PCR specifique du virus du Sras permet le diagnostic virologique. En raison de la moindre sensibilite de la RT-PCR specifique du Sras, l' analyse des echantillons cliniques doit etre repetee pendant plusieurs jours. La prise en charge d' echantillons biologiques pour une suspicion d' infection par le virus A/H5N1 hautement pathogene (tableau clinique de grippe chez une personne revenant d' une region ou circule le virus A/H5N1), respecte la meme procedure. En effet, le diagnostic virologique repose sur la mise en evidence du virus ou de son ARN genomique. Les echantillons biologiques permettant le diagnostic sont des prelevements respiratoires, des selles, du serum ou du liquide cephalorachidien (LCR). L' isolement du virus sur culture cellulaire doit etre realise dans un laboratoire de niveau de confinement BSL3. Pour la recherche de l' ARN genomique, l' extraction de l' ARN doit, elle aussi, etre realisee dans un laboratoire de niveau de confinement BSL3. Une RT-PCR en temps reel ciblant un fragment du gene de l' hemagglutinine H5 permet un diagnostic specifique de la grippe A/H5N1. Ces procedures sont actuellement en place dans les laboratoires de virologie afin de diagnostiquer les eventuels premiers cas de grippe a virus A/H5N1 ou la reemergence du virus du Sras.

Code(s) de classement : 002B24; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Emerging disease; Human; Respiratory system; Severe acute respiratory syndrome; Pathogenic; Coronavirus; Influenzavirus; Clinical biology; Virological exploration; Laboratory investigations; Influenzavirus AH5N1; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Coronaviridae; Nidovirales; Virus; Orthomyxoviridae; Respiratory disease; Lung disease
Descripteur(s) français
Descripteur(s) : Maladie emergente; Homme; Appareil respiratoire; Syndrome respiratoire aigu severe; Pathogene; Coronavirus; Influenzavirus; Biologie clinique; Exploration virologique; Examen laboratoire; Influenzavirus AH5N1; Grippe aviaire

Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Coronaviridae; Nidovirales; Virus; Orthomyxoviridae; Appareil respiratoire pathologie; Poumon pathologie

060456429
PASCAL

An in vitro fluorescence screen to identify antivirals that disrupt hepatitis B virus capsid assembly

Titre : An in vitro fluorescence screen to identify antivirals that disrupt hepatitis B virus capsid assembly

Auteur(s) : STRAY Stephen J; JOHNSON Jennifer M; KOPEK Benjamin G; ZLOTNICK Adam
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Source : Nature biotechnology. 2006; 24 (3) : 358-362
ISSN : 1087-0156
CODEN : NABIF9
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : correspondence,-letters
Nombre de références : 29 ref.

Résumé : Virus assembly has not been routinely targeted in the development of antiviral drugs, in part because of the lack of tractable methods for screening in vitro. We have developed an in vitro assay of hepatitis B virus (HBV) capsid assembly, based on fluorescence quenching of dye-labeled capsid protein, for testing potential inhibitors. This assay is adaptable to high-throughput screening and can identify small-molecule inhibitors of virus assembly that prevent, inappropriately accelerate and/or misdirect capsid formation to yield aberrant particles. An in vitro primary screen has the advantage of identifying promising lead compounds affecting assembly without the requirement that they be taken up by cells in culture and be nontoxic. Our approach may facilitate the identification of antivirals targeting viruses other than HBV, such as avian influenza and HIV.

Code(s) de classement : 002A31; 215

Descripteur(s) anglais
Descripteur(s) : In vitro; Fluorescence; Antiviral; Capsid; Targeting; Hepatitis B virus; Method; Joining; Screening; Inhibitor
Desc. génériques : Biotechnology; Biological sciences; Orthohepadnavirus; Hepadnaviridae; Virus
Descripteur(s) français
Descripteur(s) : In vitro; Fluorescence; Antiviral; Capside; Ciblage; Virus hepatite B; Methode; Assemblage; Criblage; Inhibiteur
Desc. génériques : Biotechnologie; Sciences biologiques; Orthohepadnavirus; Hepadnaviridae; Virus
Localisation : INIST, Shelf number 19676, INIST No. 354000115188760240

Origine de la notice : INIST

060511540
PASCAL

Respiratory hygiene in the emergency department

Titre : Respiratory hygiene in the emergency department

Auteur(s) : ROTHMAN Richard E; IRVIN Charlene B; MORAN Gregory J; SAUER Lauren; BRADSHAW Ylisabyth S; FRY Robert B JR; JOSEPHINE Elaine B; LEDYARD Holly K; HIRSHON Jon Mark
Auteur(s) : Public Health Committee of the American College of Emergency Physicians, United States
Affiliation(s) : Department of Emergency Medicine, The Johns Hopkins University, Baltimore, MD, United States; Department of Emergency Medicine, St. John Hospital and Medical Center, Wayne State University School of Medicine, Detroit, MI, United States; Department of Emergency Medicine and Division of Infectious Diseases, Olive View-University of California, Los Angeles Medical Center, Los Angeles, CA, United States; Department of Public Health and Family Medicine, Tufts University School of Medicine, Boston, MA, United States; Department of Emergency Medicine, Wadley Regional Medical Center, Texarkana, TX, United States; Department of Emergency Medicine, Our Lady of Mercy Medical Center, Bronx, NY, United States; Department of Emergency Medicine, St. Luke's-Roosevelt Hospital Center, New York, NY, United States; Department of Emergency Medicine, University of Cincinnati Hospital, Cincinnati, OH, United States; Department of Emergency Medicine, and Department of Epidemiology and Preventive Medicine, University of Maryland School of Medicine, Baltimore, MD, United States

Source : Annals of emergency medicine. 2006; 48 (5) : 570-582
ISSN : 0196-0644
CODEN : AEMED3
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 63 ref.

Résumé : The emergency department (ED) is an essential component of the public health response plan for control of acute respiratory infectious threats. Effective respiratory hygiene in the ED is imperative to limit the spread of dangerous respiratory pathogens, including influenza, severe acute respiratory syndrome, avian influenza, and bioterrorism agents, particularly given that these agents may not be immediately identifiable. Sustaining effective respiratory control measures is especially challenging in the ED because of patient crowding, inadequate staffing and resources, and ever-increasing numbers of immunocompromised patients. Threat of contagion exists not only for ED patients but also for visitors, health care workers, and inpatient populations. Potential physical sites for respiratory disease transmission extend from out-of-hospital care, to triage, waiting room, ED treatment area, and the hospital at large. This article presents a summary of the most current information available in the literature about respiratory hygiene in the ED, including administrative, patient, and legal issues. Wherever possible, specific recommendations and references to practical information from the Centers for Disease Control and Prevention are provided. The "Administrative Issues" section describes coordination with public health departments, procedures for effective facility planning, and measures for health care worker protection (education, staffing optimization, and vaccination). The patient care section addresses the potentially infected ED patient, including emergency medical services concerns, triage planning, and patient transport. "Legal Issues" discusses the interplay between public safety and patient privacy. Emergency physicians play a critical role in early identification, treatment, and containment of potentially lethal respiratory pathogens. This brief synopsis should help clinicians and administrators understand, develop, and implement appropriate policies and procedures to address respiratory hygiene in the ED.

Code(s) de classement : 002B27B; 002B27B14C; 002B27B02

Descripteur(s) anglais
Descripteur(s) : Resuscitation; Intensive care; Hygiene; Emergency department
Desc. génériques : Resuscitation; Intensive care medicine; Medical sciences; Resuscitation; Intensive care medicine; Medical sciences; Pneumology; Respiratory system; Resuscitation; Intensive care medicine; Medical sciences
Descripteur(s) français

Descripteur(s) : Reanimation; Soin intensif; Hygiene; Service urgence
Desc. génériques : Reanimation; Soins intensifs; Sciences medicales; Reanimation; Soins intensifs; Sciences medicales; Pneumologie; Appareil respiratoire; Reanimation; Soins intensifs; Sciences medicales
Localisation : INIST, Shelf number 19670, INIST No. 354000158840760120

Origine de la notice : INIST

060509824
PASCAL

Acute respiratory distress syndrome induced by avian influenza a (H5N1) virus in mice

Titre : Acute respiratory distress syndrome induced by avian influenza a (H5N1) virus in mice

Auteur(s) : TONG XU; JIAN QIAO; LIHONG ZHAO; GUIRONG WANG; GUIMEI HE; KAI LI; YONG TIAN; MINGYU GAO; JIANLIN WANG; HUIYU WANG; CHANGGUI DONG
Affiliation(s) : Department of Pathophysiology, College of Veterinary Medicine, China Agricultural University, Beijing, China

Source : American journal of respiratory and critical care medicine. 2006; 174 (9) : 1011-1017
ISSN : 1073-449X
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 31 ref.

Résumé : Rationale and Objective: The acute respiratory distress syndrome (ARDS) caused by avian influenza H5N1 viral infection has been reported in many humans since this virus was found to infect humans in Hong Kong in 1997, but no studies regarding an animal model of ARDS with H5N1 viral infection have been found in the literature. Here we present a mouse model of ARDS induced by H5N1 virus. Methods: Six- to 8-wk-old BALB/c mice were inoculated intranasally (50 <mu>l) with 1 x 10<sup>2 50% mouse infectious doses of A/Chicken/ Hebei/108/2002 (H5N1) virus. Lung injury was assessed by observation of lung water content and histopathology. Arterial blood gas, white blood cell count in bronchial alveolar lavage fluid, and tumor necrosis factor-a and interleukin-6 in bronchoalveolar lavage fluid and serum were measured at the indicated time points. Results: Our data showed that H5N1 viral infection in mice resulted in typical ARDS, which was characterized by the following features: (1) about 80% of mice (13 of 16) dead on Days 6 to 8 postinoculation; (2) highly edematous lungs and dramatically increased lung wet:dry weight ratios and lung wet weight:body weight ratios; (3) inflammatory cellular infiltration, alveolar and interstitial edema, and hemorrhage in lungs; (4) progressive and severe hypoxemia; and (S) significant increase in neutrophils, tumor necrosis factor-a, and interleukin-6 in BALF. Conclusion: These results suggested that we successfully established a mouse model of ARDS with H5N1 viral infection, which may benefit further investigation into the pathogenesis of human ARDS induced by H5N1 virus.

Code(s) de classement : 002B27B; 002B27B02; 002B27D01

Descripteur(s) anglais
Descripteur(s) : Respiratory distress; Resuscitation; Intensive care; Influenza A virus; Animal; Mouse; Cytokine; Avian influenza
Desc. génériques : Resuscitation; Intensive care medicine; Medical sciences; Pneumology; Respiratory system; Resuscitation; Intensive care medicine; Medical sciences; Transfusion; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata; Respiratory disease
Descripteur(s) français
Descripteur(s) : Detresse respiratoire; Reanimation; Soin intensif; Virus grippal A; Animal; Souris; Cytokine; Grippe aviaire
Desc. génériques : Reanimation; Soins intensifs; Sciences medicales; Pneumologie; Appareil respiratoire; Reanimation; Soins intensifs; Sciences medicales; Transfusion; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata; Appareil respiratoire pathologie
Localisation : INIST, Shelf number 2013, INIST No. 354000158834330100

Origine de la notice : INIST

060508211
PASCAL

Emerging respiratory viruses : Challenges and vaccine strategies

Titre : Emerging respiratory viruses : Challenges and vaccine strategies

Auteur(s) : GILLIM ROSS Laura; SUBBARAO Kanta
Affiliation(s) : Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20892, United States

Source : Clinical microbiology reviews Print. 2006; 19 (4) : 592, 614-636 [24 p.]
ISSN : 0893-8512
CODEN : CMIREX
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 245 ref.

Résumé : The current threat of avian influenza to the human population, the potential for the reemergence of severe acute respiratory syndrome (SARS)-associated coronavirus, and the identification of multiple novel respiratory viruses underline the necessity for the development of therapeutic and preventive strategies to combat viral infection. Vaccine development is a key component in the prevention of widespread viral infection and in the reduction of morbidity and mortality associated with many viral infections. In this review we describe the different approaches currently being evaluated in the development of vaccines against SARS-associated coronavirus and avian influenza viruses and also highlight the many obstacles encountered in the development of these vaccines. Lessons learned from current vaccine studies, coupled with our increasing knowledge of the host and viral factors involved in viral pathogenesis, will help to increase the speed with which efficacious vaccines targeting newly emerging viral pathogens can be developed.

Code(s) de classement : 002A05F04; 002B05

Descripteur(s) anglais
Descripteur(s) : Vaccine; Review
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Vaccin; Article synthese
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales
Localisation : INIST, Shelf number 21815, INIST No. 354000158744400020

Origine de la notice : INIST

060505280
PASCAL

Meta-analysis: Convalescent blood products for spanish influenza pneumonia : A future H5N1 treatment? Commentary

Titre : Meta-analysis: Convalescent blood products for spanish influenza pneumonia : A future H5N1 treatment? Commentary

Auteur(s) : LUKE Thomas C; KILBANE Edward M; JACKSON Jeffrey L; HOFFMAN Stephen L; TREANOR John J, comment
Affiliation(s) : University of Rochester Medical Center, Rochester, NY 14642, United States; Bureau of Medicine and Surgery, U.S. Navy, Washington, DC, United States; Uniformed Services University of the Health Sciences, Bethesda, Maryland, United States; Protein Potential LLC, Rockville, Maryland, United States

Source : Annals of internal medicine. 2006; 145 (8) : 599-609,631-632 [13 p.]
ISSN : 0003-4819
CODEN : AIMEAS
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : article; comments
Nombre de références : 74 ref.

Résumé : Background: Studies from the Spanish influenza era reported that transfusion of influenza-convalescent human blood products reduced mortality in patients with influenza complicated by pneumonia. Treatments for H5N1 influenza are unsatisfactory, and convalescent human plasma containing H5N1 antibodies could be an effective therapy during outbreaks and pandemics. Purpose: To determine whether transfusion with influenza-convalescent human blood products reduced the risk for death in patients with Spanish influenza pneumonia. Data Sources: Manual search of English-language journals from 1918 to 1925. Citations from retrieved studies were also searched. Study Selection: Published English-language studies that had at least 10 patients in the treatment group, used convalescent blood products to treat Spanish influenza pneumonia in a hospital setting, and reported on a control or comparison group. Data Extraction: Two investigators independently extracted data on study characteristics, outcomes, adverse events, and quality. Data Synthesis: Eight relevant studies involving 1703 patients were found. Treated patients, who were often selected because of more severe illness, were compared with untreated controls with influenza pneumonia in the same hospital or ward. The overall crude case-fatality rate was 16% (54 of 336) among treated patients and 37% (452 of 1219) among controls. The range of absolute risk differences in mortality between the treatment and control groups was 8% to 26% (pooled risk difference, 21% [95% Cl, 15% to 27%]). The overall crude case-fatality rate was 19% (28 of 148) among patients who received early treatment (after <4 days of pneumonia complications) and 59% (49 of 83) among patients who received late treatment (after >=4 days of pneumonia complications). The range of absolute risk differences in mortality between the early treatment group and the late treatment group was 26% to 50% (pooled risk difference, 41 % [Cl, 29% to 54%]). Adverse effects included chill reactions and possible exacerbations of symptoms in a few patients. Limitations: Studies were few and had many methodologic limitations. No study was a blinded, randomized, or placebo-controlled trial. Some pertinent studies may have been missed. Conclusions: Patients with Spanish influenza pneumonia who received influenza-convalescent human blood products may have experienced a clinically important reduction in the risk for death. Convalescent human H5N1 plasma could be an effective, timely, and widely available treatment that should be studied in clinical trials.

Code(s) de classement : 002B30A11; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Pneumonia; Metaanalysis; Evidence based medicine; Immunotherapy; Blood product; Influenza; Bibliographic review; Treatment; Convalescence; Serum; Immunomodulation; Prospective; Human; Prevention; Epidemiology; Antibody; Feasibility; History; Influenzavirus AH5N1; Spanish flu

Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Respiratory disease; Lung disease

Descripteur(s) français

Descripteur(s) : Pneumonie; Metaanalyse; Medecine factuelle; Immunotherapie; Constituant sang; Grippe; Revue bibliographique; Traitement; Convalescence; Serum; Immunomodulation; Prospective; Homme; Prevention; Epidemiologie; Anticorps; Faisabilite; Histoire; 1918 1925; Influenzavirus AH5N1; Grippe espagnole

Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Appareil respiratoire pathologie; Poumon pathologie

Localisation : INIST, Shelf number 2014, INIST No. 354000158730460060

Origine de la notice : INIST

060501330
PASCAL

Cross-protectiveness and immunogenicity of influenza A/duck/singapore/3/97(H5) vaccines against infection with A/vietnam/1203/04(H5N1) virus in ferrets

Titre : Cross-protectiveness and immunogenicity of influenza A/duck/singapore/3/97(H5) vaccines against infection with A/vietnam/1203/04(H5N1) virus in ferrets

Auteur(s) : LIPATOV Aleksandr S; HOFFMANN Erich; SALOMON Rachelle; YEN Hui Ling; WEBSTER Robert G
Affiliation(s) : Division of Virology, Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, Tennessee, United States

Source : The Journal of infectious diseases. 2006; 194 (8) : 1040-1043
ISSN : 0022-1899
CODEN : JIDIAQ
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : short-communication
Nombre de références : 15 ref.

Résumé : Ferrets were immunized with two 7-<mu>g doses of hemagglutinin from inactivated whole-virus vaccines containing the hemagglutinin gene of A/Duck/Singapore/3/97(H5N3) then inoculated with a lethal dose of A/Vietnam/1203/04(H5Nl) (Viet/1203/04). Serum samples did not react with Viet/1203/ 04 in hemagglutination-inhibition (HI) or virus-neutralization (VN) tests. All vaccinated ferrets survived the challenge, whereas all mock-immunized ferrets died. Immunized ferrets had significantly lower virus titers in the upper respiratory tract and less-severe disease. Vaccine generated from antigenically different H5 virus protects against infection by a highly pathogenic H5 strain. Neither HI nor VN testing provides correlates of cross-protection in ferrets.

Code(s) de classement : 002A05F04; 002B05; 002A05C10

Descripteur(s) anglais
Descripteur(s) : Virus; Immunogenicity; Singapore; Vaccine; Vietnam; Microbiology; Infection; Influenza A; Avian influenza
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Infectious diseases; Medical sciences; Virology; Microbiology; Biological sciences; Asia; Viral disease
Descripteur(s) français
Descripteur(s) : Virus; Immunogenicite; Singapour; Vaccin; Vietnam; Microbiologie; Infection; Grippe A; Grippe aviaire
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Virologie; Microbiologie; Sciences biologiques; Asie; Virose
Localisation : INIST, Shelf number 2052, INIST No. 354000157260790020

Origine de la notice : INIST

060500663
PASCAL

Avian influenza a (H5N1) infection in a child

Titre : Avian influenza a (H5N1) infection in a child

Auteur(s) : WITAYATHAWORNWONG Prasonk
Affiliation(s) : Pediatric Department, Petchabun Hospital, Petchabun, Thailand

Source : Southeast Asian journal of tropical medicine and public health. 2006; 37 (4) : 684-689
ISSN : 0125-1562
CODEN : SJTMAK
Date de publication : 2006
Pays de publication : Thailand
Langue(s) : English
Type de document : Serial
Type de document : case-report,-clinical-case
Nombre de références : 1 p.1/4

Résumé : A previously healthy, 9-year-old girl was admitted to the hospital with respiratory insufficiency. She had mild and severe respiratory symptoms for 3 weeks and 4 days before admission, respectively. She had a history of close contact with her domestic poultry, which was infected with avian influenza A (H5N1). She was isolated with the air-borne transmission prevention mode of treatment. Acute respiratory distress syndrome (ARDS) was documented from the time of admission and mechanical ventilation was introduced without improvement. She had multiple episodes of diarrhea for 2 days. Her condition deteriorated and she expired in 4 days. Throat swab RT-PCR and viral culture for avian influenza A (H5N1) were positive.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza A; Child; Tropical medicine; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Human
Descripteur(s) français
Descripteur(s) : Grippe A; Enfant; Medecine tropicale; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Homme
Localisation : INIST, Shelf number 19778, INIST No. 354000157264000130

Origine de la notice : INIST

060496440
PASCAL

Regional collaboration in the Middle East to deal with H5N1 avian flu

Titre : Regional collaboration in the Middle East to deal with H5N1 avian flu

Auteur(s) : LEVENTHAL Alex; RAMLAWI Assad; BELBIESI Adel; BALICER Ran D
Affiliation(s) : Israel Ministry of Health, PO Box 1176, Jerusalem 91010, Israel; Palestinian Authority Ministry of Health, Ramallah, West Bank, Jordan; Jordan Ministry of Health, Amman, Jordan; Steering Committee for Pandemic Influenza Preparedness, Ramat-Gan 52392, Israel

Source : BMJ British medical journal International ed. 2006; 333 (7573) : 856-858
ISSN : 0959-8146
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 10 ref.

Résumé : In 2005-6 Arab and Israeli collaboration contained outbreaks of avian flu in the Middle East This initiative shows how building relationships through joint efforts creates an infrastructure for cross border collaboration during emergencies.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Regional; Middle east; Medicine; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Asia
Descripteur(s) français
Descripteur(s) : Regional; Moyen Orient; Medecine; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Asie
Localisation : INIST, Shelf number 5002A, INIST No. 354000139227040180

Origine de la notice : INIST

Zoonotic viral diseases and the frontier of early diagnosis, control and prevention

Titre : Zoonotic viral diseases and the frontier of early diagnosis, control and prevention

Auteur(s) : HEENEY J L
Affiliation(s) : Department of Virology, BPRC, Rijswijk, Netherlands; Department of Medical Microbiology, University of Leiden, Leiden, Netherlands

Source : Journal of internal medicine. 2006; 260 (5) : 399-408
ISSN : 0954-6820
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 83 ref.

Résumé : Public awareness of the human health risks of zoonotic infections has grown in recent years. Currently, concern of H5N1 flu transmission from migratory bird populations has increased with foci of fatal human cases. This comes on the heels of other major zoonotic viral epidemics in the last decade. These include other acute emerging or re-emerging viral diseases such as severe acute respiratory syndrome (SARS), West-Nile virus, Ebola virus, monkeypox, as well as the more inapparent insidious slow viral and prion diseases. Virus infections with zoonotic potential can become serious killers once they are able to establish the necessary adaptations for efficient human-to-human transmission under circumstances sufficient to reach epidemic proportions. The monitoring and early diagnosis of these potential risks are overlapping frontiers of human and veterinary medicine. Here, current viral zoonotics and evolving threats are reviewed.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Viral disease; Early stage; Diagnosis; Emerging disease; Surveillance; Check; West Nile encephalitis; Prevention; Ebola virus; Severe acute respiratory syndrome; Vaccine; Immunoprophylaxis; Zoonosis; Review; Bibliographic review; Medicine; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Infection; Arbovirus disease; Filovirus; Filoviridae; Mononegavirales; Virus; Respiratory disease; Lung disease; Cerebral disorder; Central nervous system disease; Nervous system diseases
Descripteur(s) français
Descripteur(s) : Virose; Stade precoce; Diagnostic; Maladie emergente; Surveillance; Controle; Encephalite West Nile; Prevention; Virus Ebola; Syndrome respiratoire aigu severe; Vaccin; Immunoprophylaxie; Zoonose; Article synthese; Revue bibliographique; Medecine; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Infection; Arbovirose; Filovirus; Filoviridae; Mononegavirales; Virus; Appareil respiratoire pathologie; Poumon pathologie; Encephale pathologie; Systeme nerveux central pathologie; Systeme nerveux pathologie
Localisation : INIST, Shelf number 893A, INIST No. 354000158759340010

Origine de la notice : INIST

060489115
PASCAL

A computer evaluation of ventilation performance in a negative-pressure operating theater

Titre : A computer evaluation of ventilation performance in a negative-pressure operating theater

Auteur(s) : CHOW Tin Tai; KWAN Anne; ZHANG LIN; WEI BAI
Affiliation(s) : Division of Building Science and Technology, City University of Hong Kong, Hong Kong; Department of Anaesthesiology, United Christian Hospital, Hong Kong

Source : Anesthesia and analgesia. 2006; 103 (4) : 913-918
ISSN : 0003-2999
CODEN : AACRAT
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 11 ref.

Résumé : BACKGROUND: A negative-pressure operating theater is required to limit the spread of respiratory diseases in patients with severe acute respiratory syndrome, tuberculosis, avian influenza, or similar infectious diseases. In Hong Kong, we converted a conventional operating theater into a negative-pressure operating theater that has been in service for more than a year. In this article, we introduce its ventilation design and evaluate the airflow performance in relation to different combinations of medical lamp configurations and modes of launching infectious particles into the room air. METHODS: We used a computational fluid dynamics technique for the numerical analysis. RESULTS: Our analyses showed that the airflow performance in the negative-pressure operating theater was satisfactory and comparable to the original positive-pressure design. The airflow pattern effectively controlled the dispersion of infectious particles. Our calculations demonstrated that the airflow contained the dispersion of infectious particles released from the patient sufficiently to protect the surgical team, and vice versa. CONCLUSIONS: Computational fluid dynamics can be used to assess airflow in a negative-pressure operating room and model the dispersion of infectious particles from the patient.

Code(s) de classement : 002B27A

Descripteur(s) anglais
Descripteur(s) : Negative pressure; Anesthesia
Desc. génériques : Anesthesia; Medical sciences
Descripteur(s) français
Descripteur(s) : Pression negative; Anesthesie
Desc. génériques : Anesthesie; Sciences medicales
Localisation : INIST, Shelf number 3213, INIST No. 354000152276640180

Origine de la notice : INIST

Factors involved in the aerosol transmission of infection and control of ventilation in healthcare premises

Titre : Factors involved in the aerosol transmission of infection and control of ventilation in healthcare premises

Auteur(s) : TANG J W; LI Y; EAMES I; CHAN P K S; RIDGWAY G L
Affiliation(s) : Department of Microbiology, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, New Territories, Hong Kong; Department of Mechanical Engineering, The University of Hong Kong, Pokfulam, Hong Kong; Department of Mechanical Engineering, University College London, London, United Kingdom; School of Public Health, The Chinese University of Hong Kong, Hong Kong; Capital Investment and Planning, University College London Hospitals, London, United Kingdom

Source : The Journal of hospital infection. 2006; 64 (2) : 100-114
ISSN : 0195-6701
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 155 ref.

Résumé : The epidemics of severe acute respiratory syndrome (SARS) in 2003 highlighted both short- and long-range transmission routes, i.e. between infected patients and healthcare workers, and between distant locations. With other infections such as tuberculosis, measles and chicken-pox, the concept of aerosol transmission is so well accepted that isolation of such patients is the norm. With current concerns about a possible approaching influenza pandemic, the control of transmission via infectious air has become more important. Therefore, the aim of this review is to describe the factors involved in: (1) the generation of an infectious aerosol, (2) the transmission of infectious droplets or droplet nuclei from this aerosol, and (3) the potential for inhalation of such droplets or droplet nuclei by a susceptible host. On this basis, recommendations are made to improve the control of aerosol-transmitted infections in hospitals as well as in the design and construction of future isolation facilities.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Severe acute respiratory syndrome; Influenza; Aerosols; Transmission; Check; Ventilation
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Prevention; Respiratory disease; Lung disease
Descripteur(s) français
Descripteur(s) : Syndrome respiratoire aigu severe; Grippe; Aerosol; Transmission; Controle; Ventilation
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Prevention; Appareil respiratoire pathologie; Poumon pathologie
Localisation : INIST, Shelf number 18802, INIST No. 354000142926930010

Origine de la notice : INIST

060523748
PASCAL

Les solutions vaccinales chez l' homme et l' animal face aux virus influenza aviaire H<sub>5N<sub>1; H<sub>5N<sub>1 : vaccine solutions for humans and other animals

Titre : Les solutions vaccinales chez l' homme et l' animal face aux virus influenza aviaire H<sub>5N<sub>1; H<sub>5N<sub>1 : vaccine solutions for humans and other animals

Auteur(s) : DURAND Maurice Paul
Affiliation(s) : Academie nationale de medecine, France

Source : Bulletin de l'Academie nationale de medecine. 2006; 190 (4-5) : 963-972
ISSN : 0001-4079
CODEN : BANMAC
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Langue(s) du résumé : English
Type de document : Serial
Nombre de références : 21 ref.

Résumé : L' hypervirulence du virus H<sub>5N<sub>1 rend impossible la production classique du virus grippal sur oeuf embryonne; il existe des solutions alternatives : en pathologie aviaire, un virus recombinant vivant variole du canari (fowl-pox)-H<sub>5 est utilise. Beaucoup plus largement encore un vaccin inactive adjuve H<sub>5N<sub>2, immunogene par son hemagglutinine H<sub>5 est commercialise (technique DIVA). La prophylaxie est differente entre pays europeens et asiatiques. En pathologie humaine, la solution retenue par l' OMS consiste a preparer un vaccin a partir d' un virus apathogene PR8 auquel H<sub>5 modifiee et Nj d' un virus pandemique ont ete greffees. Le mediocre pouvoir immunogene du vaccin impliquera une augmentation de la quantite d' antigene et l' utilisation d' immunostimulants. Pourra-t-on satisfaire une demande forte en cas de pandemie ? Recemment un vaccin vivant a base d' adenovirus couple au gene H<sub>5 a ete propose. Enfin des auteurs chinois soulignent l' interet potentiel d' un serum hyperimmun prepare sur animal en utilisation preventive et curative.

Code(s) de classement : 002B30A11; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Immunoprophylaxis; Human; Animal; Face; Prevention; Vaccine; Medicine; Scientific research; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Immunoprophylaxie; Homme; Animal; Face; Prevention; Vaccin; Medecine; Recherche scientifique; Virus H5N1; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales
Localisation : INIST, Shelf number 740, INIST No. 354000143004210150

Origine de la notice : INIST

060520285
PASCAL

Safety and immunogenicity of nonadjuvanted and MF59-adjuvanted influenza A/H9N2 vaccine preparations

Titre : Safety and immunogenicity of nonadjuvanted and MF59-adjuvanted influenza A/H9N2 vaccine preparations

Auteur(s) : ATMAR Robert L; KEITEL Wendy A; PATEL Shital M; KATZ Jacqueline M; DEWEI SHE; EL SAHLY Hana; POMPEY Justine; GATE Thomas R; COUCH Robert B
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Source : Clinical infectious diseases. 2006; 43 (9) : 1135-1142
ISSN : 1058-4838
CODEN : CIDIEL
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 23 ref.

Résumé : Background. Influenza A/H9N2 viruses can infect humans and are considered to be a pandemic threat. Effective vaccines are needed for these and other avian influenza viruses. Methods. We performed a phase I, randomized, double-blind trial to evaluate the safety and immunogenicity of a 2-dose schedule (administered on days 0 and 28) of 4 dose levels (3.75, 7.5, 15, and 30 <mu>g of hemagglutinin) of inactivated influenza A/chicken/Hong Kong/G9/97 (H9N2) vaccine with and without MF59 adjuvant. Vaccine safety was assessed with a diary and selected blood tests. Immunogenicity was measured using serum hemagglutination inhibition (HAI) and microneutralization (MNt) antibody assays. Results. Ninety-six healthy adults (age, 18-34 years) were enrolled in the study. Arm discomfort was more common in groups that received adjuvant, but adverse effects of the vaccination were generally mild. Geometric mean serum HAI and MNt antibody titers to the influenza A/chicken/Hong Kong/G9/97 (H9N2) virus strain for all vaccine groups were similar on day 0 but were significantly higher (P<.001) on both days 28 and 56 for the MF59-adjuvanted vaccine groups than for groups given nonadjuvanted vaccine. Other measures of immunogenicity were also higher in the adjuvanted vaccine groups. HAI and MNt geometric mean titers measured after the administration of a single dose of MF59-adjuvanted vaccine were similar to those measured after 2 doses of nonadjuvanted vaccine. Conclusions. The combination of MF59 adjuvant with a subunit vaccine was associated with improved immune responses to an influenza A/H9N2 virus. The adjuvanted vaccine was immunogenic even after a single dose, raising the possibility that a 1-dose vaccination strategy may be attainable with the use of adjuvanted vaccine.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza A; Immunoprophylaxis; Immunogenicity; Prevention; Vaccine
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe A; Immunoprophylaxie; Immunogenicite; Prevention; Vaccin
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 18407, INIST No. 354000158813460020

Origine de la notice : INIST

Integrated molecular signature of disease : Analysis of influenza virus-infected macaques through functional genomics and proteomics

Titre : Integrated molecular signature of disease : Analysis of influenza virus- infected macaques through functional genomics and proteomics

Auteur(s) : BAAS T; BASKIN C R; DIAMOND D L; GARCIA SASTRE A; BIELEFELDT OHMANN H; TUMPEY T M; THOMAS M J; CARTER V S; TEAL T H; VAN HOEVEN N; PROLL S; JACOBS J M; CALDWELL Z R; GRITSENKO M A; HUKKANEN R R; CAMP D G II; SMITH R D; KATZE M G
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Source : Journal of virology. 2006; 80 (21) : 10813-10828
ISSN : 0022-538X
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 85 ref.

Résumé : Recent outbreaks of avian influenza in humans have stressed the need for an improved nonhuman primate model of influenza pathogenesis. In order to further develop a macaque model, we expanded our previous in vivo genomics experiments with influenza virus-infected macaques by focusing on the innate immune response at day 2 postinoculation and on gene expression in affected lung tissue with viral genetic material present. Finally, we sought to identify signature genes for early infection in whole blood. For these purposes, we infected six pigtailed macaques (Macaca nemestrina) with reconstructed influenza A/Texas/36/91 virus and three control animals with a sham inoculate. We sacrificed one control and two experimental animals at days 2, 4, and 7 postinfection. Lung tissue was harvested for pathology, gene expression profiling, and proteomics. Blood was collected for genomics every other day from each animal until the experimental endpoint. Gross and microscopic pathology, immunohistochemistry, viral gene expression by arrays, and/or quantitative real-time reverse transcription-PCR confirmed successful yet mild infections in all experimental animals. Genomic experiments were performed using macaque-specific oligonucleotide arrays, and high-throughput proteomics revealed the host response to infection at the mRNA and protein levels. Our data showed dramatic differences in gene expression within regions in influenza virus-induced lesions based on the presence or absence of viral mRNA. We also identified genes tightly coregulated in peripheral white blood cells and in lung tissue at day 2 postinoculation. This latter finding opens the possibility of using gene expression arrays on whole blood to detect infection after exposure but prior to onset of symptoms or shedding.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Genomics; Proteomics; Microbiology; Virology; Infection
Desc. génériques : Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus; Genomique; Proteomique; Microbiologie; Virologie; Infection
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13592, INIST No. 354000158805950510

060518383
PASCAL

Sense and the science of childhood immunization : Can we achieve more with less?

Titre : Sense and the science of childhood immunization : Can we achieve more with less?

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Source : Vaccine . 2006; 24 (42-43) : 6460-6467
ISSN : 0264-410X
CODEN : VACCDE
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 73 ref.

Résumé : The threat of biological terrorism with small pox virus and a global influenza pandemic in the face of limited vaccine supply recently stimulated research into the evaluation of fractional dose vaccine regimens, with promising immunogenicity results. While this approach is not new, it has been less applied to vaccines for less sensational but nevertheless, significant killer diseases. This manuscript provides an overview of the basics of immunization as it applies to the current practice of immunization in children, comments on the untapped avenues for cost reduction of vaccine delivery, and the potential for saving more lives with currently available resources.

Code(s) de classement : 002A05F04

Descripteur(s) anglais
Descripteur(s) : Immunization; Vaccine; Antigen
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences
Descripteur(s) français
Descripteur(s) : Immunisation; Vaccin; Antigene
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques
Localisation : INIST, Shelf number 20289, INIST No. 354000158786230020

Origine de la notice : INIST

060517314
PASCAL

Place des antiviraux dans la lutte contre une pandemie grippale. Apport des travaux recents de modelisation Synthese preparee par le groupe " Epidemiologie "1 InVs-Inserm novembre 2005; Role of antiviral drugs in containing pandemic influenza. Contribution of recent modelling exercises Synthesis prepared by the InVs/Inserm "Epidemiology" group - November 2005

Titre : Place des antiviraux dans la lutte contre une pandemie grippale. Apport des travaux recents de modelisation Synthese preparee par le groupe " Epidemiologie "1 InVs-Inserm novembre 2005; Role of antiviral drugs in containing pandemic influenza. Contribution of recent modelling exercises Synthesis prepared by the InVs/Inserm "Epidemiology" group - November 2005

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Source : Medecine et maladies infectieuses. 2006; 36 (9) : 449-453
ISSN : 0399-077X
CODEN : MMAIB5
Date de publication : 2006
Pays de publication : France
Langue(s) : French
Langue(s) du résumé : English
Type de document : Serial
Nombre de références : 6 ref.

Résumé : La menace d' une pandemie grippale a conduit de nombreux pays a constituer des stocks d' antiviraux et tout particulierement d' oseltamivir, qui peut etre utilise en prophylaxie comme en curatif. Plusieurs travaux recents, fondes sur des modelisations mathematiques, ont etudie l' impact de l' utilisation a large echelle de ce medicament pour controler une pandemie naissante, ralentir sa diffusion dans un pays ou en limiter l' impact epidemiologique. Ils concluent que la combinaison de l' utilisation des antiviraux en prophylaxie en anneau autour des premiers cas, combinee a des mesures de distanciation sociale, pourraient permettre de controler les premiers foyers de transmission d' un virus a potentiel pandemique, a la double condition d' une transmissibilite moderee du virus et d' une tres grande rapidite et couverture de mise en oeuvre des mesures de controle. En cas d' echec, ces memes strategies seraient susceptibles de retarder la diffusion du virus dans un pays. L' utilisation des antiviraux en curatif devrait diminuer substantiellement l' impact epidemiologique de la pandemie, voire la proportion de la population atteinte, dans l' hypothese ou le traitement curatif reduirait la duree de la phase infectieuse. Ces travaux sont en faveur de la constitution de stocks d' antiviraux destines a couvrir, au minium les besoins dans le traitement des cas et au mieux permettant de contribuer a l' effort international de controle des premiers foyers epidemiques et d' intervenir autour des premieres chaines de transmission autochtones, pour ralentir la diffusion nationale du virus. Ces resultats sont conditionnes a l' efficacite de l' oseltamivir sur le virus pandemique et confirment l' importance d' une surveillance epidemiologique sensible et reactive.

Code(s) de classement : 002B05C02C; 002B02S05

Descripteur(s) anglais
Descripteur(s) : Influenza; Antiviral; Modeling; Synthesis; Epidemiology; Surveillance
Desc. génériques : Virology; Infectious diseases; Medical sciences; Virology; Infectious diseases; Pharmacology; Medical sciences; Viral disease; Infection
Descripteur(s) français

Descripteur(s) : Grippe; Antiviral; Modelisation; Synthese; Epidemiologie; Surveillance; Pandemie
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 15434, INIST No. 354000139220350030

Origine de la notice : INIST

060514596
PASCAL

Influenza, grippe aviaire et pandemie

Titre : Influenza, grippe aviaire et pandemie

Auteur(s) : RIOUX Yolaine
Source : PERSPECTIVE INFIRMIERE. 2006-09/2006-10; 4 (1) : 29-33
ISSN : 1708-1890
Date de publication : 2006
Pays de publication : Canada
Langue(s) : French
Type de document : Serial

Résumé : Le ministre de la Sante et des Services sociaux du Quebec a lance en 2006 le dernier Plan quebecois de lutte face a une pandemie d' influenza. Cet article permet de faire le point sur la grippe aviaire, la pandemie d' influenza, le plan quebecois et le role des infirmieres dans ce cadre

Code(s) de classement : 002B30A11

Descripteur(s) anglais
Descripteur(s) : Occupational role; Nurse; Quebec; Health policy
Desc. génériques : Public health; Medical sciences; Canada; North America; America
Descripteur(s) français
Descripteur(s) : Role professionnel; Infirmier; Quebec; Politique sanitaire
Desc. génériques : Sante publique; Sciences medicales; Canada; Amerique du Nord; Amerique
Localisation : BDSP/APHPDOC

Origine de la notice : BDSP

060513053
PASCAL

Detection and isolation of highly pathogenic H5N1 avian influenza a viruses from blow flies collected in the vicinity of an infected poultry farm in Kyoto, Japan, 2004

Titre : Detection and isolation of highly pathogenic H5N1 avian influenza a viruses from blow flies collected in the vicinity of an infected poultry farm in Kyoto, Japan, 2004

Auteur(s) : SAWABE Kyoko; HOSHINO Keita; ISAWA Haruhiko; SASAKI Toshinori; HAYASHI Toshihiko; TSUDA Yoshio; KURAHASHI Hiromu; TANABAYASHI Kiyoshi; HOTTA Akitoyo; SAITO Takehiko; YAMADA Akio; KOBAYASHI Mutsuo
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Source : The American journal of tropical medicine and hygiene. 2006; 75 (2) : 327-332
ISSN : 0002-9637
CODEN : AJTHAB
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : case-report,-clinical-case
Nombre de références : 23 ref.

Résumé : During the outbreak of highly pathogenic avian influenza that occurred in Tamba Town, Kyoto Prefecture in 2004, a total of 926 flies were collected from six sites within a radius of 2.3 km from the poultry farm. The H5 influenza A virus genes were detected from the intestinal organs, crop, and gut of the two blow fly species, Calliphora nigribarbis and Aldrichina grahami, by reverse transcription-polymerase chain reaction for the matrix protein (M) and hemagglutinin (HA) genes. The HA gene encoding multiple basic amino acids at the HA cleavage site indicated that this virus is a highly pathogenic strain. Based on the full-length sequences of the M, HA, and neuraminidase (NA) segments of virus isolates through embryonated chicken eggs, the virus from C. nigribarbis (A/blow fly/Kyoto/93/2004) was characterized as H5N1 subtype influenza A virus and shown to have > 99.9% identities in all three RNA segments to a strain from chickens (A/chicken/Kyoto/3/2004) and crows (A/crows/Kyoto/53/2004) derived during this outbreak period in Kyoto in 2004. Our results suggest it is possible that blow flies could become a mechanical transmitter of H5N1 influenza virus.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Infection; Detection; Isolation; Japan; Tropical medicine; Diptera; Poultry; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences; Asia; Insecta; Arthropoda; Invertebrata
Descripteur(s) français
Descripteur(s) : Infection; Detection; Isolement; Japon; Medecine tropicale; Diptera; Volaille; Virus H5N1; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Asie; Insecta; Arthropoda; Invertebrata
Localisation : INIST, Shelf number 6817, INIST No. 354000133473080270

Origine de la notice : INIST

060511639
PASCAL

Rapid diagnosis of avian influenza (AIH and assessment of pathogenicity of avian H5 and H7 subtypes by molecular methods. New diagnostic technology: Applications in animal health and biologics controls, Saint-Malo, France, October 3-5, 2005, proceedings of an international conference

Titre : Rapid diagnosis of avian influenza (AIH and assessment of pathogenicity of avian H5 and H7 subtypes by molecular methods. New diagnostic technology: Applications in animal health and biologics controls, Saint-Malo, France, October 3-5, 2005, proceedings of an international conference

Auteur(s) : SENNE D A; PEDERSEN J C; SUAREZ D L; PANIGRAHY B; VANNIER Philippe, ed; ESPESETH David, ed
Auteur(s) : French Food Safety Agency AFSSA, France, org cong.; Institute for Higher Education in Animal Production and Food Industries ISPAIA, 22440 Ploufragan, France, org cong.; International Association for Biologicals IABs, Perkasie, PA, United States, org cong.; US Department of Agriculture USDA Animal and Plants Health Inspection Service APHIS, United States, org cong.; World Organization for Animal Health OIE, Unknown, org cong.
Affiliation(s) : U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services, National Veterinary Services Laboratories, Ames, Iowa, United States; U.S. Department of Agriculture, Agriculture Research Service, Southeast Poultry Research Laboratory, Athens, Georgia, United States; AFSSA, Ploufragan, France; IABs, Perkasie, PA, United States

Source : Developments in biologicals. 2006; 126 : 171-177
Informations congrès : *New diagnostic technology: Applications in animal health and biologics controls. International conference, *Saint-Malo France, *2005-10-03
ISSN : 1424-6074
Date de publication : 2006
Pays de publication : Switzerland
Langue(s) : English
Type de document : Serial; *Conference-Meeting
Nombre de références : 14 ref.

Résumé : Avian influenza (Al) is a highly contagious viral disease of poultry that is found worldwide. There are two forms of Al: a mild form called low pathogenicity avian influenza (LPAI), and a severe form called highly pathogenic avian influenza (HPAI). HPAI is associated with the H5 and H7 subtypes of Al virus (AIV) and is subject to Federal control and International reporting. A real-time reverse transcription-polymerase chain reaction (rRT-PCR) assay has been developed and validated that can help in the early detection of Al outbreaks. The rRT-PCR assay can also be used to identify infections caused by H5 and H7 subtypes of AIV. New isolates of AIV must be characterized as LPAI or HPAI for reporting and control purposes. The criteria for classification of an Al virus as HPAI are defined by the World Organization for Animal Health (OIE); the definition includes a virulence and a molecular criterion. The virulence requirement for HPAI is defined as an AIV killing 75% or more of eight inoculated chickens within 10 days. The molecular criterion is the presence of multiple dibasic amino acids at the proteolytic cleavage site of the haemagglutinin (H) protein. All HPAI viruses isolated before 2002 fulfilled both the virulence and molecular criteria. Consequently, nucleotide sequencing of the H gene and deduction of the amino acid motif at the H cleavage site has been successfully used to assess the virulence of H5 and H7 AIVs rapidly. Since 2002, however, there have been three outbreaks of HPAI where the viruses responsible for the outbreaks have either fulfilled the virulence criterion or the molecular criterion, but not both.

Code(s) de classement : 002A01D

Descripteur(s) anglais
Descripteur(s) : Aves; Virus; Chicken; Diagnosis; Pathogenicity; Subtype; Method; Poultry; Severe; Real time;

Reverse transcription polymerase chain reaction; Influenza A; Polymerase chain reaction; Detection; Identification; Isolate; Avian influenza

Desc. génériques : Biological sciences; Vertebrata; Veterinary; Viral disease; Infection

Descripteur(s) français

Descripteur(s) : Aves; Virus; Poulet; Diagnostic; Pouvoir pathogene; Soustype; Methode; Volaille; Grave; Temps reel; Reaction chaine polymerase RT; Grippe A; Reaction chaine polymerase; Detection; Identification; Isolat; Grippe aviaire

Desc. génériques : Sciences biologiques; Vertebrata; Veterinaire; Virose; Infection

Localisation : INIST, Shelf number 13557, INIST No. 354000157238940260

Origine de la notice : INIST

060511615
PASCAL

Detection of animal viruses using nucleic acid sequence-based amplification (NASBA). New diagnostic technology: Applications in animal health and biologics controls, Saint-Malo, France, October 3-5, 2005, proceedings of an international conference

Titre : Detection of animal viruses using nucleic acid sequence-based amplification (NASBA). New diagnostic technology: Applications in animal health and biologics controls, Saint-Malo, France, October 3-5, 2005, proceedings of an international conference

Auteur(s) : LAU L T; FUNG Y W W; YU A C H; VANNIER Philippe, ed; ESPESETH David, ed
Auteur(s) : French Food Safety Agency AFSSA, France, org cong.; Institute for Higher Education in Animal Production and Food Industries ISPAIA, 22440 Ploufragan, France, org cong.; International Association for Biologicals IABs, Perkasie, PA, United States, org cong.; US Department of Agriculture USDA Animal and Plants Health Inspection Service APHIS, United States, org cong.; World Organization for Animal Health OIE, Unknown, org cong.
Affiliation(s) : Hong Kong DNA Chips Ltd., Hang Tung Resources Centre, Shau Kei Wan, Hong Kong; Neuroscience Research Institute, Key Laboratory of Neuroscience, Peking University and Department of Neurobiology, Peking University Health Science Centre, Beijing, China; Anigen Diagnostics Limited, Hang Tung Resources Centre, Shau Kei Wan, Hong Kong; AFSSA, Ploufragan, France; IABs, Perkasie, PA, United States

Source : Developments in biologicals. 2006; 126 : 7-15
Informations congrès : *New diagnostic technology: Applications in animal health and biologics controls. International conference, *Saint-Malo France, *2005-10-03
ISSN : 1424-6074
Date de publication : 2006
Pays de publication : Switzerland
Langue(s) : English
Type de document : Serial; *Conference-Meeting
Nombre de références : 19 ref.

Résumé : As seen in recent avian influenza outbreaks in Asia, prevention is the key to fighting infectious disease successfully. Efficient disease surveillance systems on the basis of molecular diagnostics will help monitor the emergence of viruses in the early stage and thus prompt containment measures can be in place to minimize disease spread. Here we describe and review molecular diagnostics focusing on nucleic acid sequence-based amplification (NASBA) technology in detecting viruses causing animal diseases, such as avian influenza, foot-and-mouth disease, and Newcastle disease. NASBA offers high sensitivity, specificity, accuracy, and speed of availability of results, and NASBA would be the most applicable molecular diagnostics for disease surveillance and control.

Code(s) de classement : 002A01D

Descripteur(s) anglais
Descripteur(s) : Detection; Nucleic acid; Amplification; Asia; Prevention; Early stage; Review; Newcastle disease; Foot and mouth disease; Sensitivity; Specificity; Avian influenza
Desc. génériques : Biological sciences; Viral disease; Infection; Veterinary
Descripteur(s) français
Descripteur(s) : Detection; Acide nucleique; Amplification; Asie; Prevention; Stade precoce; Article synthese; Newcastle maladie; Fievre aphteuse; Sensibilite; Specificite; Grippe aviaire
Desc. génériques : Sciences biologiques; Virose; Infection; Veterinaire
Localisation : INIST, Shelf number 13557, INIST No. 354000157238940020

Origine de la notice : INIST

060540368
PASCAL

Three indonesian clusters of H5N1 virus infection in 2005

Titre : Three indonesian clusters of H5N1 virus infection in 2005

Auteur(s) : NYOMAN KANDUN I; WIBISONO Hariadi; SEDYANINGSIH Endang R; YUSHARMEN; HADISOEDARSUNO Widarso; PURBA Wilfried; SANTOSO Hari; SEPTIAWATI Chita; TRESNANINGSIH Erna; HERIYANTO Bambang; YUWONO Djoko; HARUN Syahrial; SOEROSO Santoso; GIRIPUTRA Sardikin; BLAIR Patrick J; JEREMIJENKO Andrew; KOSASIH Herman; PUTNAM Shannon D; SAMAAN Gina; SILITONGA Marlinggom; CHAN K H; POON Leo L M; LIM Wilina; KLIMOV Alexander; LINDSTROM Stephen; YI GUAN; DONIS Ruben; KATZ Jacqueline; COX Nancy; PEIRIS Malik; UYEKI Timothy M
Affiliation(s) : Directorate General of Disease Control and Environmental Health, Ministry of Health, Jakarta, Indonesia; National Institute of Health Research and Development, Ministry of Health, Jakarta, Indonesia; Infectious Disease Hospital Rumah Sakit Penyakit Infeksi Sulianti Saroso, North Jakarta, Indonesia; U.S. Naval Medical Re search Unit 2, Jakarta, Indonesia; World Health Organization, Jakarta, Indonesia; University of Hong Kong, Hong Kong; Department of Health, Hong Kong; Centers for Disease Control and Prevention, Atlanta, United States

Source : The New England journal of medicine. 2006; 355 (21) : 2186-2194
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CODEN : NEJMAG
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 23 ref.

Résumé : BACKGROUND Since 2003, the widespread ongoing epizootic of avian influenza A (H5N1) among poultry and birds has resulted in human H5N1 cases in 10 countries. The first case of H5N1 virus infection in Indonesia was identified in July 2005. METHODS We investigated three clusters of Indonesian cases with at least two ill persons hospitalized with laboratory evidence of H5N1 virus infection from June through October 2005. Epidemiologic, clinical, and virologic data on these patients were collected and analyzed. RESULTS Severe disease occurred among all three clusters, including deaths in two clusters. Mild illness in children was documented in two clusters. The median age of the eight patients was 8.5 years (range, 1 to 38). Four patients required mechanical ventilation, and four of the eight patients (50%) died. In each cluster, patients with H5N1 virus infection were members of the same family, and most lived in the same home. In two clusters, the source of H5N1 virus infection in the index patient was not determined. Virus isolates were available for one patient in each of two clusters, and molecular sequence analyses determined that the isolates were clade 2 H5N1 viruses of avian origin. CONCLUSIONS In 2005 in Indonesia, clusters of human infection with clade 2 H5N1 viruses included mild, severe, and fatal cases among family members.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Indonesia; Viral disease; 2005; Public health; Medicine; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Asia; Infection
Descripteur(s) français
Descripteur(s) : Indonesie; Virose; 2005; Sante publique; Medecine; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Asie; Infection
Localisation : INIST, Shelf number 6013, INIST No. 354000143131430050

Origine de la notice : INIST

060540367
PASCAL

Avian influenza a (H5N1) infection in eastern Turkey in 2006

Titre : Avian influenza a (H5N1) infection in eastern Turkey in 2006

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Résumé : BACKGROUND An outbreak of highly pathogenic avian influenza A (H5N1) that had previously been detected throughout Asia, with major economic and health repercussions, extended to eastern Turkey in late December 2005 and early January 2006. METHODS We documented the epidemiologic, clinical, and radiologic features of all cases of confirmed H5N1 virus infection in patients who were admitted to Yuzuncu Yil University Hospital in Van, Turkey, between December 31, 2005, and January 10, 2006. RESULTS H5N1 virus infection was diagnosed in eight patients. The patients were 5 to 15 years of age, and all eight had a history of close contact with diseased or dead chickens. The mean (<plus or minus sign>SD) time between exposure and the onset of illness was 5.0<plus or minus sign>1.3 days. All the patients had fever, and seven had clinical and radiologic evidence oi pneumonia at presentation; four patients died. Results of enzyme-linked immunosorbent assay and rapid influenza tests were negative in all patients, and the diagnosis was made by means of a polymerase-chain-reaction assay. CONCLUSIONS H5N1, which causes a spectrum of illnesses in humans, including severe and fatal respiratory disease, can be difficult to diagnose.

Code(s) de classement : 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza A; Turkey; 2006; Public health; Medicine; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Asia
Descripteur(s) français
Descripteur(s) : Grippe A; Turquie; 2006; Sante publique; Medecine; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Asie
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PASCAL

Natural variation can significantly alter the sensitivity of influenza A (H5N1) viruses to oseltamivir

Titre : Natural variation can significantly alter the sensitivity of influenza A (H5N1) viruses to oseltamivir

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Résumé : Geographic spread of highly pathogenic avian H5N1 influenza viruses may give rise to an influenza pandemic. During the first months of a pandemic, control measures would rely mainly on antiviral drugs, such as the neuraminidase (NA) inhibitors oseltamivir and zanamivir. In this study, we compare the sensitivities to oseltamivir of the NAs of several highly pathogenic H5N1 viruses isolated in Asia from 1997 to 2005. The corresponding 50% inhibitory concentrations were determined using a standard in vitro NA inhibition assay. The K<sub>m for the substrate and the affinity for the inhibitor (K<sub>i) of NA were determined for a 1997 and a 2005 virus, using an NA inhibition assay on cells transiently expressing the viral enzyme. Our data show that the sensitivities of the NAs of H5N1 viruses isolated in 2004 and 2005 to oseltamivir are about 10-fold higher than those of earlier H5N1 viruses or currently circulating H1N1 viruses. Three-dimensional modeling of the N1 protein predicted that Glu248Gly and Tyr252His changes could account for increased sensitivity. Our data indicate that genetic variation in the absence of any drug-selective pressure may result in significant variations in sensitivity to anti-NA drugs. Although the clinical relevance of a 10-fold increase in the sensitivity of NA to oseltamivir needs to be investigated further, the possibility that sensitivity to anti-NA drugs could increase (or possibly decrease) significantly, even in the absence of treatment, underscores the need for continuous evaluation of the impact of genetic drift on this parameter, especially for influenza viruses with pandemic potential.

Code(s) de classement : 002B02S

Descripteur(s) anglais
Descripteur(s) : Sensitivity; Oseltamivir; Antiviral; Influenzavirus AH5N1
Desc. génériques : Infectious diseases; Pharmacology; Medical sciences; Exo <alpha> sialidase; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Enzyme inhibitor; Neuraminidase inhibitor
Descripteur(s) français
Descripteur(s) : Sensibilite; Oseltamivir; Antiviral; Influenzavirus AH5N1
Desc. génériques : Maladies infectieuses; Pharmacologie; Sciences medicales; Exo <alpha> sialidase; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Inhibiteur enzyme; Inhibiteur neuraminidase
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PASCAL

Inhibition of multiple subtypes of influenza A virus in cell cultures with morpholino oligomers

Titre : Inhibition of multiple subtypes of influenza A virus in cell cultures with morpholino oligomers

Auteur(s) : QING GE; PASTEY Manoj; KOBASA Darwyn; PUTHAVATHANA Piliapan; LUPFER Christopher; BESTWICK Richard K; IVERSEN Patrick L; JIANZHU CHEN; STEIN David A
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Résumé : Peptide-conjugated phosphorodiamidate morpholino oligomers (P-PMO) are single-stranded nucleic acid-like antisense agents that can reduce gene expression by sterically blocking complementary RNA sequence. P-PMO are water soluble and nuclease resistant, and they readily achieve uptake into cells in culture under standard conditions. Eight P-PMO, each 20 to 22 bases in length, were evaluated for their ability to inhibit influenza A virus (FLUAV) A/PR/8/34 (H1N1) replication in cell culture. The P-PMO were designed to base pair with FLUAV RNA sequences that are highly conserved across viral subtypes and considered critical to the FLUAV biological-cycle, such as gene segment termini and mRNA translation start site regions. Several P-PMO were highly efficacious, each reducing viral titer in a dose-responsive and sequence-specific manner in A/PR/8/34-infected cells. Two P-PMO, one designed to target the AUG translation start site region of PB1 mRNA and the other the 3'-terminal region of nucleoprotein viral genome RNA, also proved to be potent against several other FLUAV strains, including A/WSN/33 (H1N1), A/Memphis/8/88 (H3N2), A/Eq/Miami/63 (H3N8), A/Eq/Prague/56 (H7N7), and the highly pathogenic A/Thailand/1(KAN-1)/04 (H5N1). The P-PMO exhibited minimal cytotoxicity in cell viability assays. High efficacy by two of the P-PMO against multiple FLUAV subtypes suggests that these oligomers represent a broad-spectrum therapeutic approach against a high percentage of known FLUAV strains.

Code(s) de classement : 002B02S

Descripteur(s) anglais
Descripteur(s) : Inhibitor; Multiple; Subtype; Typing; Influenza A virus; In vitro; Cell culture; Oligomer
Desc. génériques : Infectious diseases; Pharmacology; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Inhibiteur; Multiple; Soustype; Typage; Virus grippal A; In vitro; Culture cellulaire; Oligomere
Desc. génériques : Maladies infectieuses; Pharmacologie; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus
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PASCAL

The NS1 gene contributes to the virulence of H5N1 avian influenza viruses

Titre : The NS1 gene contributes to the virulence of H5N1 avian influenza viruses

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Résumé : In the present study, we explored the genetic basis underlying the virulence and host range of two H5N1 influenza viruses in chickens. A/goose/Guangdong/1/96 (GS/GD/1/96) is a highly pathogenic virus for chickens, whereas A/goose/Guangdong/2/96 (GS/GD/2/96) is unable to replicate in chickens. These two H5N1 viruses differ in sequence by only five amino acids mapping to the PA, NP, Ml, and NS1 genes. We used reverse genetics to create four single-gene recombinants that contained one of the sequence-differing genes from nonpathogenic GS/GD/2/96 and the remaining seven gene segments from highly pathogenic GS/GD/1/96. We determined that the NS1 gene of GS/GD/2/96 inhibited the replication of GS/GD/1/96 in chickens, while the substitution of the PA, NP, or M gene did not change the highly pathogenic properties of GS/GD/1/96. Conversely, of the recombinant viruses generated in the GS/GD/2/96 background, only the virus containing the NS1 gene of GS/GD/1/96 was able to replicate and cause disease and death in chickens. The single-amino-acid difference in the sequence of these two NS1 genes resides at position 149. We demonstrate that a recombinant virus expressing the GS/GD/1/96 NS1 protein with Ala149 is able to antagonize the induction of interferon protein levels in chicken embryo fibroblasts (CEFs), but a recombinant virus carrying a Val149 substitution is not capable of the same effect. These results indicate that the NS1 gene is critical for the pathogenicity of avian influenza virus in chickens and that the amino acid residue Alal49 correlates with the ability of these viruses to antagonize interferon induction in CEFs.

Code(s) de classement : 002A05C05

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Gene; Virulence; Host range; Infectivity; Property structure relationship
Desc. génériques : Genetics; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Gene; Virulence; Spectre hote; Pouvoir infectant; Relation structure propriete
Desc. génériques : Genetique; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus
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PASCAL

Genomic analysis of influenza A viruses, including avian Flu (H5N1) strains

Titre : Genomic analysis of influenza A viruses, including avian Flu (H5N1) strains

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Résumé : This study was designed to conduct genomic analysis in two steps, such as the overall relative synonymous codon usage (RSCU) analysis of the five virus species in the orthomyxoviridae family, and more intensive pattern analysis of the four subtypes of influenza A virus (H1N1, H2N2, H3N2, and H5N1) which were isolated from human population. All the subtypes were categorized by their isolated regions, including Asia, Europe, and Africa, and most of the synonymous codon usage patterns were analyzed by correspondence analysis (CA). As a result, influenza A virus showed the lowest synonymous codon usage bias among the virus species of the orthomyxoviridae family, and influenza B and influenza C virus were followed, while suggesting that influenza A virus might have an advantage in transmitting across the species barrier due to their low codon usage bias. The ENC values of the host-specific HA and NA genes represented their different HA and NA types very well, and this reveals that each influenza A virus subtype uses different codon usage patterns as well as the amino acid compositions. In NP, PA and PB2 genes, most of the virus subtypes showed similar RSCU patterns except for H5N1 and H3N2 (A/HK/1774/1999) subtypes which were suspected to be transmitted across the species barrier, from avian and porcine species to human beings, respectively. This distinguishable synonymous codon usage patterns in non-human origin viruses might be useful in determining the origin of influenza A viruses in genomic levels as well as the serological tests. In this study, all the process, including extracting sequences from GenBank flat file and calculating codon usage values, was conducted by Java codes, and these bioinformatics-related methods may be useful in predicting the evolutionary patterns of pandemic viruses.

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Descripteur(s) anglais
Descripteur(s) : Genomics; Influenza A; Correspondence analysis; Influenza A virus; Codon; Public health; Epidemiology; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Genomique; Grippe A; Analyse correspondance; Virus grippal A; Codon; Sante publique; Epidemiologie; Souche H5N1; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Influenzavirus A; Orthomyxoviridae; Virus
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