grippe

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050437195
PASCAL

Implementation of the community network of reference laboratories for human influenza in Europe

Titre : Implementation of the community network of reference laboratories for human influenza in Europe

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Résumé : Background: The increased need for accurate influenza laboratory surveillance data in the European Union required formalisation of the existing network of collaborating national influenza reference laboratories participating in the European Influenza Surveillance Scheme (EISS). Objective: To establish a Community Network of Reference Laboratories for Human Influenza in Europe (CNRL). Methods: Virologists in EISS defined the objective and tasks of the CNRL. Performance of the laboratories in the tasks was monitored by questionnaire-based inventories and quality control assessments (QCA). Subsequently, actions were defined to improve the performance of the CNRL. Results: The CNRL started in April 2003 and included as of May 2004 32 laboratories in 24 European countries. The objective is to provide high quality reference services for human influenza surveillance, early warning and pandemic preparedness in Europe. The defined basic tasks are direct detection, culture, typing, subtyping and strain characterisation of influenza virus, diagnostic influenza serology and storage of clinical specimens and virus isolates. The questionnaire-based inventories and QCAs revealed that the majority of CNRL laboratories perform well in most of the basic tasks, although improvements are needed in certain areas of virus testing. Therefore, task groups have been established to further improve the methods used in the network. The CNRL has proven its usefulness during the 2003-2004 season by the reporting of accurate data concerning the flu epidemic caused by A/Fujian/411/2002 (H3N2)-like viruses and by the rapid sharing of information, protocols and reagents during the A(H5N1) and A(H7N3) epizootics in Asia and Canada. Conclusion: EISS has established a functioning Community Network of Reference Laboratories for Human Influenza in Europe and laid the foundation for further enhancement and collaborations. Important next steps include improving the laboratories to carry out all basic tasks and collaboration with the European Centre for Disease Prevention and Control.

Code(s) de classement : 002A05C10; 002B05C02J

Descripteur(s) anglais
Descripteur(s) : Human; Europe; Microbiology; Virology; Influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Homme; Europe; Microbiologie; Virologie; Grippe
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection

050436832
PASCAL

Incidence of adamantane resistance among influenza A (H3N2) viruses isolated worldwide from 1994 to 2005 : a cause for concern. Commentary

Titre : Incidence of adamantane resistance among influenza A (H3N2) viruses isolated worldwide from 1994 to 2005 : a cause for concern. Commentary

Auteur(s) : BRIGHT Rick A; MEDINA Mane Jo; XIYAN XU; PEREZ ORONOZ Gilda; WALLIS Teresa R; DAVIS Xiaohong M; POVINELLI Laura; COX Nancy J; KLIMOV Alexander I; YI GUAN, comment; HONGLIN CHEN, comment
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Langue(s) : English
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Résumé : Background Adamantanes have been used to treat influenza A virus infections for many years. Studies have shown a low incidence of resistance to these drugs among circulating influenza viruses; however, their use is rising worldwide and drug resistance has been reported among influenza A (H5N1) viruses isolated from poultry and human beings in Asia. We sought to assess adamantane resistance among influenza A viruses isolated during the past decade from countries participating in WHO's global influenza surveillance network. Methods We analysed data for influenza field isolates that were obtained worldwide and submitted to the WHO Collaborating Center for Influenza at the US Centers for Disease Control and Prevention between Oct 1, 1994, and Mar 31, 2005. We used pyrosequencing, confirmatory sequence analysis, and phenotypic testing to detect drug resistance among circulating influenza A H3N2 (n=6524), H1N1 (n=589), and H1N2 (n=83) viruses. Findings More than 7000 influenza A field isolates were screened for specific aminoacid substitutions in the M2 gene known to confer drug resistance. During the decade of surveillance a significant increase in drug resistance was noted, from 0-4% in 1994-1995 to 12.3% in 2003-2004. This increase in the proportion of resistant viruses was weighted heavily by those obtained from Asia with 61% of resistant viruses isolated since 2003 being from people in Asia. Interpretation Our data raise concerns about the appropriate use of adamantanes and draw attention to the importance of tracking the emergence and spread of drug-resistant influenza A viruses.

Code(s) de classement : 002B01

Descripteur(s) anglais
Descripteur(s) : Incidence; Epidemiology; Public health; Chemotherapy; Resistance; Influenza A; 1994; 2005; Cause; Critical study; Medicine; Treatment
Desc. génériques : Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Adamantane; Incidence; Epidemiologie; Sante publique; Chimiotherapie; Resistance; Grippe A; 1994; 2005; Cause; Etude critique; Medecine; Traitement
Desc. génériques : Sciences medicales; Virose; Infection

050431428
PASCAL

Protection of mice against lethal infection with highly pathogenic H7N7 influenza A virus by using a recombinant low-pathogenicity vaccine strain

Titre : Protection of mice against lethal infection with highly pathogenic H7N7 influenza A virus by using a recombinant low-pathogenicity vaccine strain

Auteur(s) : DE WIT Emmie; MUNSTER Vincent J; SPRONKEN Monique I J; BESTEBROER Theo M; BAAS Chantal; BEYER Walter E P; RIMMELZWAAN Guus F; OSTERHAUS Albert D M E; FOUCHIER Ron A M
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Pays de publication : United States
Langue(s) : English
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Résumé : In 2003, an outbreak of highly pathogenic avian influenza occurred in the Netherlands. The avian H7N7 virus causing the outbreak was also detected in 88 humans suffering from conjunctivitis or mild respiratory symptoms and one person who died of pneumonia and acute respiratory distress syndrome. Here we describe a mouse model for lethal infection with A/Netherlands/219/03 isolated from the fatal case. Because of the zoonotic and pathogenic potential of the H7N7 virus, a candidate vaccine carrying the avian hemagglutinin and neuraminidase proteins produced in the context of the high-throughput vaccine strain A/PR/8/34 was generated by reverse genetics and tested in the mouse model. The hemagglutinin gene of the recombinant vaccine strain was derived from a low-pathogenicity virus obtained prior to the outbreak from a wild mallard. The efficacy of a classical nonadjuvanted subunit vaccine and an immune stimulatory complex-adjuvanted vaccine was compared. Mice receiving the nonadjuvanted vaccine revealed low antibody titers, lack of clinical protection, high virus titers in the lungs, and presence of virus in the spleen, liver, kidneys, and brain. In contrast, mice receiving two doses of the immune stimulatory complex-adjuvanted vaccine revealed high antibody titers, clinical protection, <equivalent sign>1,000-fold reduction of virus titers in the lungs, and rare detection of the virus in other organs. This is the first report of an H7 vaccine candidate tested in a mammalian model. The data presented suggest that vaccine candidates based on low-pathogenicity avian influenza A viruses, which can be prepared ahead of pandemic threats, can be efficacious if an effective adjuvant is used.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Mouse; Pathogenicity; Vaccine strain; Microbiology; Virology; Influenza A
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Rodentia; Mammalia; Vertebrata; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Souris; Pouvoir pathogene; Souche vaccinale; Microbiologie; Virologie; Grippe A
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Rodentia; Mammalia; Vertebrata; Virose; Infection
Localisation : INIST, Shelf number 13592, INIST No. 354000132681650270

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050430596
PASCAL

Avian influenza a (H5N1) infection in humans

Titre : Avian influenza a (H5N1) infection in humans

Auteur(s) : Writing Committee of the World Health Organization WHO Consultation on Human Influenza A/H5, Unknown
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Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 71 ref.

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

Descripteur(s) anglais
Descripteur(s) : Influenza A; Human; Medicine; Avian influenza; Influenzavirus AH5N1
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe A; Homme; Medecine; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 6013, INIST No. 354000132714410080

Origine de la notice : INIST

050424937
PASCAL

Strategies for containing an emerging influenza pandemic in Southeast Asia

Titre : Strategies for containing an emerging influenza pandemic in Southeast Asia

Auteur(s) : FERGUSON Neil M; CUMMINGS Derek A T; CAUCHEMEZ Simon; FRASER Christophe; RILEY Steven; MEEYAI Aronrag; IAMSIRITHAWORN Sopon; BURKE Donald S
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Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 37 ref.

Résumé : Highly pathogenic H5N1 influenza A viruses are now endemic in avian populations in Southeast Asia, and human cases continue to accumulate. Although currently incapable of sustained human-to-human transmission, H5N1 represents a serious pandemic threat owing to the risk of a mutation or reassortment generating a virus with increased transmissibility. Identifying public health interventions that might be able to halt a pandemic in its earliest stages is therefore a priority. Here we use a simulation model of influenza transmission in Southeast Asia to evaluate the potential effectiveness of targeted mass prophylactic use of antiviral drugs as a containment strategy. Other interventions aimed at reducing population contact rates are also examined as reinforcements to an antiviral-based containment policy. We show that elimination of a nascent pandemic may be feasible using a combination of geographically targeted prophylaxis and social distancing measures, if the basic reproduction number of the new virus is below 1.8. We predict that a stockpile of 3 million courses of antiviral drugs should be sufficient for elimination. Policy effectiveness depends critically on how quickly clinical cases are diagnosed and the speed with which antiviral drugs can be distributed.

Code(s) de classement : 002B05C02C; 002B03D; 002B02S05

Descripteur(s) anglais
Descripteur(s) : South east Asia; Human; Transmission; Risk factor; Mutation; Chemoprophylaxis; Influenza A; Simulation model; Health policy; Antiviral; Reinforcement; Sanitary program; Prevention; Predictive factor; Diagnosis; Avian influenza; Influenzavirus AH5N1; Pandemic
Desc. génériques : Virology; Infectious diseases; Medical sciences; Toxicology; Medical sciences; Virology; Infectious diseases; Pharmacology; Medical sciences; Asia; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Asie du sud est; Homme; Transmission; Facteur risque; Mutation; Chimioprophylaxie; Grippe A; Modele simulation; Politique sanitaire; Antiviral; Renforcement; Programme sanitaire; Prevention; Facteur predictif; Diagnostic; Asie Sud Est; Grippe aviaire; Influenzavirus AH5N1; Pandemie
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Toxicologie; Sciences medicales; Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; Asie; Virose; Infection

050424501
PASCAL

Modelling the impact of an influenza pandemic on critical care services in England

Titre : Modelling the impact of an influenza pandemic on critical care services in England

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Résumé : The UK Influenza Pandemic Contingency Plan docs not consider the impact of a pandemic on critical care services. We modelled the demand for critical care beds in England with software developed by the Centers for Disease Control (FLUSUKGE 1.0), using a range of attack rates and pandemic durations. Using inputs that have been employed in UK Department of Health scenarios (25% attack rate and 8-week pandemic duration) resulted in a demand for ventilatory support that exceeded 200% of present capacity. Demand remained unsustainably high even when more favourable scenarios were considered. Current critical care bed capacity in England would be unable to cope with the increased demand provided by an influenza pandemic. Appropriate contingency planning is essential.

Code(s) de classement : 002B27A

Descripteur(s) anglais
Descripteur(s) : Influenza; England; Anesthesia
Desc. génériques : Anesthesia; Medical sciences; Viral disease; Infection; Great Britain; United Kingdom; Europe
Descripteur(s) français
Descripteur(s) : Grippe; Angleterre; Anesthesie
Desc. génériques : Anesthesie; Sciences medicales; Virose; Infection; Grande Bretagne; Royaume Uni; Europe
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PASCAL

Les epidemies et l' immunite de l' humanite

Titre : Les epidemies et l' immunite de l' humanite

Auteur(s) : GUALDE N
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Langue(s) : French
Type de document : Serial
Nombre de références : dissem.

Résumé : Un des evenements mondiaux majeurs du debut du XXIe siecle fut la survenue d' une epidemie due a un agent pathogene alors inconnu, celui de syndrome respiratoire aigu severe. L' analyse de l' emergence et de la diffusion de celui qui demeura le dernier virus deletere identifie avant les craintes de la grippe aviaire, souligne a la fois la specificite de la grave pneumopathie et les caracteres communs aux epidemies ayant regulierement jalonne l' histoire de l' humanite. Durant les derniers mois de l' annee 2002, un virus agressif, heberge secretement par son "reservoir naturel", probablement la civette, le quitta pour se montrer sur la scene de l' infectiologie mondiale. Il trouva un nouveau terreau : l' homme chez qui il put exprimer les effets calamiteux que nous connaissons ! La chronique de cette epidemie, comme les comptes rendus de celles qui accompagnerent les peripeties de l' histoire de l' humanite, soulignent un element essentiel : la responsabilite de l' homme dans la diffusion des agents infectieux. En d' autres termes, l' epidemie, c' est l' homme. La diffusion de la pneumopathie apparue en Chine a reproduit, avec ses caracteres propres, les aspects communs, microbiens et humains des epidemies deja connues. En effet, qu' il s' agisse de la pandemie de peste noire du XIVe siecle, de l' epouvantable hecatombe amerindienne ayant suivi l' invasion espagnole; qu' il s' agisse des acces varioleux maintenant arretes, ou de la malaria et du cholera qui continuent de sevir; que nous regardions, plus proches de nous, les apparitions d' Ebola, de Lassa, du sida, ou plus simplement de la maladie des legionnaires, de celle de Lyme ou de la nouvelle variante de la maladie de Creutzfeldt-Jakob, l' homme est en cause dans ce qui est a proprement parler l' epidemie, c' est-a-dire la diffusion "sur le peuple" d' un agent pathogene. Certes les manifestations des epidemies dependent du microbe en cause, des epoques ou elles frappent, des groupes humains affectes; neanmoins, elles mettent regulierement a nu les travers de la nature humaine et partant les vicissitudes des societes des hommes. Avec les epidemies ressurgissent non seulement les effets demographiques mais aussi les denis, peurs, dysfonctionnements sociaux de diverses natures, les remises en cause des references morales et religieuses coutumieres. Par consequent les epidemies peuvent ebranler l' organisation sociale, modifier le cours de l' Histoire. A ces phenomenes, il convient d' associer les relations biologiques s' etablissant entre les microbes et leurs victimes. Les uns et les autres utilisent les outils faconnes a partir de leurs genes pour reduire les defenses de l' adversaire. L' homme possede la particularite de pouvoir s' immuniser naturellement et/ou en ayant recours aux biotechnologies; l' ensemble composant a terme l' immunite des populations humaines. Il convient en effet de comprendre que les microbes sont des elements consubstantiels de l' ecologie humaine. Entre eux et nous le dialogue est permanent. L' evolution des micro-organismes qui composent notre environnement est de nos jours gouvernee conjointement par la necessite pour eux de s' adapter a nos defenses naturelles mais aussi aux parades, de nature biotechnologiques, qui sont les produits de notre culture. Ainsi les recensions des diverses epidemies sont celles de mesaventures profondement humaines et presentant bien des analogies; elles ne doivent toutefois pas nous porter au desespoir. L' homme qui neglige regulierement la notion du "principe de responsabilite" du a Hans Jonas est egalement capable de reagir, inventant les moyens de prevention (surveillance), de protection (vaccins) et de defense (antibiotiques, etc.) permettant de circonvenir, ceux-la memes dont il a contribue a la diffusion

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Epidemic; History; Disease; Mental representation; Fear; Immunity; Population; High risk; Immune system; AIDS
Desc. génériques : Public health; Medical sciences; Viral disease; Infection

Descripteur(s) français
Descripteur(s) : Epidemie; Histoire; Maladie; Representation mentale; Peur; Immunite; Population; Risque eleve; Systeme immunitaire; SIDA
Desc. génériques : Sante publique; Sciences medicales; Virose; Infection
Localisation : BDSP/ENSP, Shelf number 147062

Origine de la notice : BDSP

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PASCAL

Le mystere des epidemies

Titre : Le mystere des epidemies

Auteur(s) : RODHAIN Francois; SALUZZO Jean Francois
Source : 2005; 429 p.; tabl., fig., index
Éditeur : Tallandier, Paris
ISBN : 2847341471
Date de publication : 2005
Pays de publication : France
Langue(s) : French
Type de document : Book
Nombre de références : dissem.

Résumé : Rendues plus fulgurantes encore par la generalisation des transports et parce que leur monde s' adapte toujours plus vite au notre, les nouvelles epidemies representent une menace permanente, inattendue, effrayante. Pour vous permettre d' y repondre, un collectif de chercheurs dresse ici l' etat le plus precis des dernieres decouvertes. Sous la direction de deux medecins issus de l' Institut Pasteur, une trentaine d' immunologistes, de virologues et de correspondants de l' OMS ont contribue a l' etablissement de ce livre unique. Meningites, legionellose, grippe aviaire... Comment naissent les epidemies, comment s' y preparer, savoir s' en premunir. Pour la premiere fois, une equipe de medecins vous revele les mysteres des epidemies

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Epidemic; History; Plague; Smallpox; Yellow fever; Meningitis; Disease; Immunity; Research; Prevention; Health
Desc. génériques : Public health; Medical sciences; Yersiniosis; Bacteriosis; Infection; Viral disease; Arbovirus disease
Descripteur(s) français
Descripteur(s) : Epidemie; Histoire; Peste; Variole; Fievre jaune; Meningite; Maladie; Immunite; Recherche; Prevention; Sante
Desc. génériques : Sante publique; Sciences medicales; Yersiniose; Bacteriose; Infection; Virose; Arbovirose
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Origine de la notice : BDSP

050406994
PASCAL

Avian influenza (H5N1) viruses isolated from humans in Asia in 2004 exhibit increased virulence in mammals

Titre : Avian influenza (H5N1) viruses isolated from humans in Asia in 2004 exhibit increased virulence in mammals

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Langue(s) : English
Type de document : Serial
Nombre de références : 41 ref.

Résumé : The spread of highly pathogenic avian influenza H5N1 viruses across Asia in 2003 and 2004 devastated domestic poultry populations and resulted in the largest and most lethal H5N1 virus outbreak in humans to date. To better understand the potential of H5N1 viruses isolated during this epizootic event to cause disease in mammals, we used the mouse and ferret models to evaluate the relative virulence of selected 2003 and 2004 H5N1 viruses representing multiple genetic and geographical groups and compared them to earlier H5N1 strains isolated from humans. Four of five human isolates tested were highly lethal for both mice and ferrets and exhibited a substantially greater level of virulence in ferrets than other H5N1 viruses isolated from humans since 1997. One human isolate and all four avian isolates tested were found to be of low virulence in either animal. The highly virulent viruses replicated to high titers in the mouse and ferret respiratory tracts and spread to multiple organs, including the brain. Rapid disease progression and high lethality rates in ferrets distinguished the highly virulent 2004 H5N1 viruses from the 1997 H5N1 viruses. A pair of viruses isolated from the same patient differed by eight amino acids, including a Lys/Glu disparity at 627 of PB2, previously identified as an H5N1 virulence factor in mice. The virus possessing Glu at 627 of PB2 exhibited only a modest decrease in virulence in mice and was highly virulent in ferrets, indicating that for this virus pair, the K627E PB2 difference did not have a prevailing effect on virulence in mice or ferrets. Our results demonstrate the general equivalence of mouse and ferret models for assessment of the virulence of 2003 and 2004 H5N1 viruses. However, the apparent enhancement of virulence of these viruses in humans in 2004 was better reflected in the ferret.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Human; Mammalia; Asia; Virulence; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Vertebrata
Descripteur(s) français
Descripteur(s) : Homme; Mammalia; Asie; Virulence; Microbiologie; Virologie; Grippe aviaire

Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Vertebrata
Localisation : INIST, Shelf number 13592, INIST No. 354000131591580250

050406988
PASCAL

Sialidase activity of influenza A virus in an endocytic pathway enhances viral replication

Titre : Sialidase activity of influenza A virus in an endocytic pathway enhances viral replication

Auteur(s) : SUZUKI Takashi; TAKAHASHI Tadanobu; GUO Chao Tan; JWA HIDARI Kazuya I P; MIYAMOTO Daisei; GOTO Hideo; KAWAOKA Yoshihiro; SUZUKI Yasuo
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Type de document : Serial
Nombre de références : 34 ref.

Résumé : N2 neuraminidase (NA) genes of the 1957 and 1968 pandemic influenza virus strains possessed avian-like low-pH stability of sialidase activity, unlike most epidemic strains. We generated four reverse-genetics viruses from a genetic background of A/WSN/33 (H1N1) that included parental N2 NAs of 1968 pandemic (H3N2) and epidemic (H2N2) strains or their counterpart N2 NAs in which the low-pH stability of the sialidase activity was changed by substitutions of one or two amino acid residues. We found that the transfectant viruses bearing low-pH-stable sialidase (WSN/Stable-NAs) showed 25- to 80-times-greater ability to replicate in Madin-Darby canine kidney (MDCK) cells than did the transfectant viruses bearing low-pH-unstable sialidase (WSN/ Unstable-NAs). Enzymatic activities of WSN/Stable-NAs were detected in endosomes of MDCK cells after 90 min of virus internalization by in situ fluorescent detection with 5-bromo-4-chloro-indole-3-yl-<alpha>-N-acetylneuraminic acid and Fast Red Violet LB. Inhibition of sialidase activity of WSN/Stable-NAs on the endocytic pathway by pretreatment with 4-guanidino-2,4-dideoxy-N-acetylneuraminic acid (zanamivir) resulted in a significant decrease in progeny viruses. In contrast, the enzymatic activities of WSN/Unstable-NAs, the replication of which had no effect on pretreatment with zanamivir, were undetectable in cells under the same conditions. Hemadsorption assays of transfectant-virus-infected cells revealed that the low-pH stability of the sialidase had no effect on the process of removal of sialic acid from hemagglutinin in the Golgi regions. Moreover, high titers of viruses were recovered from the lungs of mice infected with WSN/Stable-NAs on day 3 after intranasal inoculation, but WSN/Unstable-NAs were cleared from the lungs of the mice. These results indicate that sialidase activity in late endosome/lysosome traffic enhances influenza A virus replication.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenza A virus; Exo <alpha> sialidase; Endocytosis; Replication; Microbiology; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; O Glycosidases; Glycosidases; Hydrolases; Enzyme
Descripteur(s) français
Descripteur(s) : Virus grippal A; Exo <alpha> sialidase; Endocytose; Replication; Microbiologie; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; O Glycosidases; Glycosidases; Hydrolases; Enzyme
Localisation : INIST, Shelf number 13592, INIST No. 354000131591580170

050406907
PASCAL

Molecular basis of replication of duck H5N1 influenza viruses in a mammalian mouse model

Titre : Molecular basis of replication of duck H5N1 influenza viruses in a mammalian mouse model

Auteur(s) : ZEJUN LI; HUALAN CHEN; PEIRONG JIAO; GUOHUA DENG; GUOBIN TIAN; YANBING LI; HOFFMANN Erich; WEBSTER Robert G; MATSUOKA Yumiko; KANGZHEN YU
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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 30 ref.

Résumé : We recently analyzed a series of H5N1 viruses isolated from healthy ducks in southern China since 1999 and found that these viruses had progressively acquired the ability to replicate and cause disease in mice. In the present study, we explored the genetic basis of this change in host range by comparing two of the viruses that are genetically similar but differ in their ability to infect mice and have different pathogenicity in mice. A/duck/Guangxi/22/2001 (DKGX/22) is nonpathogenic in mice, whereas A/duck/Guangxi/35/2001 (DKGX/35) is highly pathogenic. We used reverse genetics to create a series of single-gene recombinants that contained one gene from DKGX/22 and the remaining seven gene segments from DKGX/35. We find that the PA, NA, and NS genes of DKGX/22 could attenuate DKGX/35 virus to some extent, but PB2 of DKGX/22 virus attenuated the DKGX/35 virus dramatically, and an Asn-to-Asp substitution at position 701 of PB2 plays a key role in this function. Conversely, of the recombinant viruses in the DKGX/22 background, only the one that contains the PB2 gene of DKGX/35 was able to replicate in mice. A single amino acid substitution (Asp to Asn) at position 701 of PB2 enabled DKGX/22 to infect and become lethal for mice. These results demonstrate that amino acid Asn 701 of PB2 is one of the important determinants for this avian influenza virus to cross the host species barrier and infect mice, though the replication and lethality of H5N1 influenza viruses involve multiple genes and may result from a constellation of genes. Our findings may help to explain the expansion of the host range and lethality of the H5N1 influenza viruses to humans.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Mammalia; Replication; Animal model; Microbiology; Virology; Influenza A; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Vertebrata; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Mammalia; Replication; Modele animal; Microbiologie; Virologie; Grippe A; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Vertebrata; Virose; Infection
Localisation : INIST, Shelf number 13592, INIST No. 354000131591580500

Origine de la notice : INIST

050379102
PASCAL

H5N2 avian influenza outbreak in Texas in 2004 : the first highly pathogenic strain in the United States in 20 years?

Titre : H5N2 avian influenza outbreak in Texas in 2004 : the first highly pathogenic strain in the United States in 20 years?

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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 44 ref.

Résumé : In early 2004, an H5N2 avian influenza virus (ATV) that met the molecular criteria for classification as a highly pathogenic AIV was isolated from chickens in the state of Texas in the United States. However, clinical manifestations in the affected flock were consistent with avian influenza caused by a low-pathogenicity AIV and the representative virus (A/chicken/Texas/298313/04 [TX/04]) was not virulent for experimentally inoculated chickens. The hemagglutinin (HA) gene of the TX/04 isolate was similar in sequence to A/chicken/Texas/ 167280-4/02 (TX/02), a low-pathogenicity AIV isolate recovered from chickens in Texas in 2002. However, the TX/04 isolate had one additional basic amino acid at the HA cleavage site, which could be attributed to a single point mutation. The TX/04 isolate was similar in sequence to TX/02 isolate in several internal genes (NP, M, and NS), but some genes (PA, PB1, and PB2) had sequence of a clearly different origin. The TX/04 isolate also had a stalk deletion in the NA gene, characteristic of a chicken-adapted AIV. By analyzing viruses constructed by in vitro mutagenesis followed by reverse genetics, we found that the pathogenicity of the TX/04 virus could be increased in vitro and in vivo by the insertion of an additional basic amino acid at the HA cleavage site and not by the loss of a glycosylation site near the cleavage site. Our study provides the genetic and biologic characteristics of the TX/04 isolate, which highlight the complexity of the polygenic nature of the virulence of influenza viruses.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Texas; Pathogenicity; Strain; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; United States; North America; America
Descripteur(s) français
Descripteur(s) : Texas; Pouvoir pathogene; Souche; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Etats Unis; Amerique du Nord; Amerique
Localisation : INIST, Shelf number 13592, INIST No. 354000131520130560

Origine de la notice : INIST

050377445
PASCAL

Are ducks contributing to the endemicity of highly pathogenic H5N1 influenza virus in Asia?

Titre : Are ducks contributing to the endemicity of highly pathogenic H5N1 influenza virus in Asia?

Auteur(s) : STURM RAMIREZ K M; HULSE POST D J; GOVORKOVA E A; HUMBERD J; SEILER P; PUTHAVATHANA P; BURANATHAI C; NEUYEN T D; CHAISINGH A; LONG H T; NAIPOSPOS T S P; CHEN H; ELLIS T M; GUAN Y; PEIRIS J S M; WEBSTER R G
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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 31 ref.

Résumé : Wild waterfowl are the natural reservoir of all influenza A viruses, and these viruses are usually nonpathogenic in these birds. However, since late 2002, H5N1 outbreaks in Asia have resulted in mortality among waterfowl in recreational parks, domestic flocks, and wild migratory birds. The evolutionary stasis between influenza virus and its natural host may have been disrupted, prompting us to ask whether waterfowl are resistant to H5N1 influenza virus disease and whether they can still act as a reservoir for these viruses. To better understand the biology of H5N1 viruses in ducks and attempt to answer this question, we inoculated juvenile mallards with 23 different H5N1 influenza viruses isolated in Asia between 2003 and 2004. All virus isolates replicated efficiently in inoculated ducks, and 22 were transmitted to susceptible contacts. Viruses replicated to higher levels in the trachea than in the cloaca of both inoculated and contact birds, suggesting that the digestive tract is not the main site of H5N1 influenza virus replication in ducks and that the fecal-oral route may no longer be the main transmission path. The virus isolates' pathogenicities varied from completely nonpathogenic to highly lethal and were positively correlated with tracheal virus titers. Nevertheless, the eight virus isolates that were nonpathogenic in ducks replicated and transmitted efficiently to naive contacts, suggesting that highly pathogenic H5N1 viruses causing minimal signs of disease in ducks can propagate silently and efficiently among domestic and wild ducks in Asia and that they represent a serious threat to human and veterinary public health.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Pathogenicity; Asia; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus

Descripteur(s) français
Descripteur(s) : Influenzavirus; Pouvoir pathogene; Asie; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13592, INIST No. 354000131520130430

050377326
PASCAL

A single amino acid substitution in 1918 influenza virus hemagglutinin changes receptor binding specificity

Titre : A single amino acid substitution in 1918 influenza virus hemagglutinin changes receptor binding specificity

Auteur(s) : GLASER Laurel; STEVENS James; ZAMARIN Dmitriy; WILSON Ian A; GARCIA SASTRE Adolfo; TUMPEY Terrence M; EASLER Christopher F; TAUBENBERGER Jeffery K; PALESE Peter
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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 28 ref.

Résumé : The receptor binding specificity of influenza viruses may be important for host restriction of human and avian viruses. Here, we show that the hemagglutinin (HA) of the virus that caused the 1918 influenza pandemic has strain-specific differences in its receptor binding specificity. The A/South Carolina/1/18 HA preferentially binds the a2,6 sialic acid (human) cellular receptor, whereas the A/New York/1/18 HA, which differs by only one amino acid, binds both the <alpha>2,6 and the <alpha>2,3 sialic acid (avian) cellular receptors. Compared to the conserved consensus sequence in the receptor binding site of avian HAs, only a single amino acid at position 190 was changed in the A/New York/1/18 HA. Mutation of this single amino acid back to the avian consensus resulted in a preference for the avian receptor.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Hemagglutinin; Specificity; Microbiology; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus; Hemagglutinine; Specificite; Microbiologie; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13592, INIST No. 354000131520130710

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050376567
PASCAL

Containing pandemic influenza at the source

Titre : Containing pandemic influenza at the source

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Langue(s) : English
Type de document : Serial
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Notes : 1/4 p. ref. et notes

Résumé : Highly pathogenic avian influenza A (subtype H5N1) is threatening to cause a human pandemic of potentially devastating proportions. We used a stochastic influenza simulation model for rural Southeast Asia to investigate the effectiveness of targeted antiviral prophylaxis, quarantine, and pre-vaccination in containing an emerging influenza strain at the source. If the basic reproductive number (R<sub>0) was below 1.60, our simulations showed that a prepared response with targeted antivirals would have a high probability of containing the disease. In that case, an antiviral agent stockpile on the order of 100,000 to 1 million courses for treatment and prophylaxis would be sufficient. If pre-vaccination occurred, then targeted antiviral prophylaxis could be effective for containing strains with an R<sub>0 as high as 2.1. Combinations of targeted antiviral prophylaxis, pre-vaccination, and quarantine could contain strains with an R<sub>0 as high as 2.4.

Code(s) de classement : 002B30A11

Descripteur(s) anglais
Descripteur(s) : Epidemic; Public health; Simulation; International; Avian influenzavirus; Mathematical model; Stochastic model; World; Pandemic; Influenzavirus AH5N1
Desc. génériques : Public health; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Epidemie; Sante publique; Simulation; International; Influenzavirus aviaire; Modele mathematique; Modele stochastique; Monde; Grippe aviaire; Pandemie; Influenzavirus AH5N1
Desc. génériques : Sante publique; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 6040, INIST No. 354000132414850240

Origine de la notice : INIST

Multinational impact of the 1968 Hong Kong influenza pandemic : Evidence for a smoldering pandemic

Titre : Multinational impact of the 1968 Hong Kong influenza pandemic : Evidence for a smoldering pandemic

Auteur(s) : VIBOUD Cecile; GRAIS Rebecca F; LAFONT Bernard A P; MILLER Mark A; SIMONSEN Lone
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CODEN : JIDIAQ
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 53 ref.

Résumé : Background. The first pandemic season of A/H3N2 influenza virus (1968/1969) resulted in significant mortality in the United States, but it was the second pandemic season of A/H3N2 influenza virus (1969/1970) that caused the majority of deaths in England. We further explored the global pattern of mortality caused by the pandemic during this period. Methods. We estimated the influenza-related excess mortality in 6 countries (United States, Canada, England and Wales, France, Japan, and Australia) using national vital statistics by age for 1967-1978. Geographical and temporal pandemic patterns in mortality were compared with the genetic drift of the influenza viruses by analyzing hemagglutinin and neuraminidase sequences from GenBank. Results. In North America, the majority of influenza-related deaths in 1968/1969 and 1969/1970 occurred during the first pandemic season (United States, 70%; Canada, 54%). Conversely, in Europe and Asia, the pattern was reversed: 70% of deaths occurred during the second pandemic season. The second pandemic season coincided with a drift in the neuraminidase antigen. Conclusion. We found a consistent pattern of mortality being delayed until the second pandemic season of A/H3N2 circulation in Europe and Asia. We hypothesize that this phenomenon may be explained by higher preexisting neuraminidase immunity (from the A/H2N2 era) in Europe and Asia than in North America, combined with a subsequent drift in the neuraminidase antigen during 1969/1970.

Code(s) de classement : 002A05; 002B05

Descripteur(s) anglais
Descripteur(s) : Hong Kong; Microbiology; Infection; Influenza A
Desc. génériques : Microbiology; Biological sciences; Infectious diseases; Medical sciences; China; Asia; Viral disease
Descripteur(s) français
Descripteur(s) : Hong Kong; Microbiologie; Infection; Grippe A
Desc. génériques : Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Chine; Asie; Virose
Localisation : INIST, Shelf number 2052, INIST No. 354000138405420060

Origine de la notice : INIST

050375519
PASCAL

Virulence may determine the necessary duration and dosage of oseltamivir treatment for highly pathogenic A/vietnam/1203/04 influenza virus in mice

Titre : Virulence may determine the necessary duration and dosage of oseltamivir treatment for highly pathogenic A/vietnam/1203/04 influenza virus in mice

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CODEN : JIDIAQ
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 45 ref.

Résumé : Background. Control of highly pathogenic avian H5N1 influenza viruses is a major public-health concern. Antiviral drugs could be the only option early in the pandemic. Methods. BALB/c mice were given oseltamivir (0.1, 1, or 10 mg/kg/day) twice daily by oral gavage; the first dose was given 4 h before inoculation with H5N1 A/Vietnam/1203/04 (VN1203/04) virus. Five- and 8-day regimens were evaluated. Results. Oseltamivir produced a dose-dependent antiviral effect against VN1203/04 in vivo (P<.01). The 5-day regimen at 10 mg/kg/day protected 50% of mice; deaths in this treatment group were delayed and indicated the replication of residual virus after the completion of treatment. Eight-day regimens improved oseltamivir efficacy, and dosages of 1 and 10 mg/kg/day significantly reduced virus titers in organs and provided 60% and 80% survival rates, respectively (P<.05). Overall, the efficacy of the 5- and 8-day regimens differed significantly (death hazard ratio, 2.658; P<.01). The new H5N1 antigenic variant VN1203/04 was more pathogenic in mice than was A/HK/156/97 virus, and a prolonged and higher-dose oseltamivir regimen may be required for the most beneficial antiviral effect. Conclusions. Oseltamivir prophylaxis is efficacious against lethal challenge with VN1203/04 virus in mice. Viral virulence may affect the antiviral treatment schedule.

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

Descripteur(s) anglais
Descripteur(s) : Influenza A virus; Mouse; Virulence; Treatment; Pathogenicity; Vietnam; Microbiology; Infection; Oseltamivir; Antiviral
Desc. génériques : Virology; Microbiology; Biological sciences; Infectious diseases; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata; Asia
Descripteur(s) français
Descripteur(s) : Virus grippal A; Souris; Virulence; Traitement; Pouvoir pathogene; Vietnam; Microbiologie; Infection; Oseltamivir; Antiviral
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata; Asie
Localisation : INIST, Shelf number 2052, INIST No. 354000132436220130

Origine de la notice : INIST

050366424
PASCAL

Studies of H5N1 influenza virus infection of pigs by using viruses isolated in Vietnam and Thailand in 2004

Titre : Studies of H5N1 influenza virus infection of pigs by using viruses isolated in Vietnam and Thailand in 2004

Auteur(s) : YOUNG KI CHOI; TIEN DZUNG NGUYEN; OZAKI Hiroichi; WEBBY Richard J; PUTHAVATHANA Pilaipan; BURANATHAL Chantanee; CHAISINGH Arunee; AUEWARAKUL Prasert; HANH N T H; SIA KIT MA; PUI YAN HUI; YI GUAN; SRIYAL MALIK PEIRIS Joseph; WEBSTER Robert G
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ISSN : 0022-538X
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 13 ref.

Résumé : To determine whether avian H5N1 influenza viruses associated with human infections in Vietnam had transmitted to pigs, we investigated serologic evidence of exposure to H5N1 influenza virus in Vietnamese pigs in 2004. Of the 3,175 pig sera tested, 8 (0.25%) were positive for avian H5N1 influenza viruses isolated in 2004 by virus neutralization assay and Western blot analysis. Experimental studies of replication and transmissibility of the 2004 Asian H5N1 viruses in pigs revealed that all viruses tested replicated in the swine respiratory tract but none were transmitted to contact pigs. Virus titers from nasal swabs peaked on day 2, and low titers were detected in the liver of two of the four pigs tested. Our findings indicate that pigs can be infected with highly lethal Asian H5N1 viruses but that these viruses are not readily transmitted between pigs under experimental conditions.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Swine; Vietnam; Thailand; Microbiology; Virology; Viral disease
Desc. génériques : Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus; Artiodactyla; Ungulata; Mammalia; Vertebrata; Asia; Veterinary; Infection
Descripteur(s) français
Descripteur(s) : Influenzavirus; Porcin; Vietnam; Thailande; Microbiologie; Virologie; Virose
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus; Artiodactyla; Ungulata; Mammalia; Vertebrata; Asie; Veterinaire; Infection
Localisation : INIST, Shelf number 13592, INIST No. 354000131511710710

Origine de la notice : INIST

050366133
PASCAL

p38 mitogen-activated protein kinase-dependent hyperinduction of tumor necrosis factor alpha expression in response to avian influenza virus H5N1

Titre : p38 mitogen-activated protein kinase-dependent hyperinduction of tumor necrosis factor alpha expression in response to avian influenza virus H5N1

Auteur(s) : LEE Davy C W; CHEUNG Chung Yan; LAW Anna H Y; MOK Chris K P; PEIRIS Malik; LAU Allan S Y
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Source : Journal of virology. 2005; 79 (16) : 10147-10154
ISSN : 0022-538X
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 37 ref.

Résumé : Avian influenza A virus subtype H5N1 can infect humans to cause a severe viral pneumonia with mortality rates of more than 30%. The biological basis for this unusual disease severity is not fully understood. We previously demonstrated that in contrast to human influenza A virus subtypes including H1N1 or H3N2, the H5N1 virus associated with the "bird flu" outbreak in Hong Kong in 1997 (H5N1/97) hyperinduces proinflammatory cytokines, including tumor necrosis factor alpha (TNF-a), in primary human macrophages in vitro. To delineate the molecular mechanisms involved, we analyzed the role of transcription factor NF-KB and cellular kinases in TNF-<alpha> dysregulation. H5N1 and H1N1 viruses did not differ in the activation of NF-KB or degradation of I<kappa>B-<alpha> in human macrophages. However, we demonstrated that unlike H1N1 virus, H5N1/97 strongly activates mitogen-activated protein kinase (MAPK), including p38 MAPK and extracellular signal-regulated kinases 1 and 2. Specific inhibitors of p38 MAPK significantly reduced the H5N1/97-induced TNF-<alpha> expression in macrophages. Taken together, our findings suggest that H5N1/97-mediated hyperinduction of cytokines involves the p38 MAPK signaling pathway. These results may provide insights into the pathogenesis of H5N1 disease and rationales for the development of novel therapeutic strategies.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Mitogen activated protein kinase; Tumor necrosis factor <alpha>; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus; Enzyme; Cytokine
Descripteur(s) français
Descripteur(s) : Influenzavirus; Mitogen activated protein kinase; Facteur necrose tumorale <alpha>; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus; Enzyme; Cytokine
Localisation : INIST, Shelf number 13592, INIST No. 354000131511710050

Origine de la notice : INIST

050365875
PASCAL

The virosome concept for influenza vaccines. Influenza in the elderly

Titre : The virosome concept for influenza vaccines. Influenza in the elderly

Auteur(s) : HUCKRIEDE Anke; BUNGENER Laura; STEGMANN Toon; DAEMEN Toos; MEDEMA Jeroen; PALACHE Abraham M; WILSCHUT Jan; GLEESON Maurice, ed
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Source : Vaccine Supplement. 2005; 23 (1) : s26-s38
ISSN : 1359-5938
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 91 ref.

Résumé : There is a need for more efficacious inactivated influenza vaccines, since current formulations show suboptimal immunogenicity in at-risk populations, like the elderly. More effective vaccines are also urgently needed for an improved influenza pandemic preparedness. In this context, there is considerable interest in virosomes. Virosomes are virus-like particles, consisting of reconstituted influenza virus envelopes, lacking the genetic material of the native virus. Virosomes are produced from influenza virus through a detergent solubilization and removal procedure. Properly reconstituted virosomes retain the cell binding and membrane fusion properties of the native virus, mediated by the viral envelope glycoprotein haemagglutinin. These functional characteristics of virosomes form the basis for their enhanced immunogenicity. First, the repetitive arrangement of haemagglutinin molecules on the virosomal surface mediates a cooperative interaction of the antigen with Ig receptors on B lymphocytes, stimulating strong antibody responses. In addition, virosomes interact efficiently with antigen-presenting cells, such as dendritic cells, resulting in activation of T lymphocytes. In a murine model system, virosomes, as compared to conventional subunit vaccine, which consists of isolated influenza envelope glycoproteins, induce a more balanced T helper 1 versus T helper 2 response, virosomes in particular eliciting stronger T helper 1 responses than subunit vaccine. Also, as a result of fusion of the virosomes with the endosomal membrane, part of the virosomal antigen gains access to the major histocompatibility class I presentation pathway, thus priming cytotoxic T lymphocyte activity. Finally, virosomes represent an excellent platform for inclusion of lipophilic adjuvants for further stimulation of vaccine immunogenicity. By virtue of these characteristics, virosomes represent a promising novel class of inactivated influenza vaccines, which not only induce high virus-neutralizing antibody titres, but also prime the cellular arm of the immune system.

Code(s) de classement : 002A05F04

Descripteur(s) anglais
Descripteur(s) : Vaccine; Influenza
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Vaccin; Grippe
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Virose; Infection
Localisation : INIST, Shelf number 20289S, INIST No. 354000137940120030

Origine de la notice : INIST

050365552
PASCAL

H5N1 influenza pandemic: contingency plans

Titre : H5N1 influenza pandemic: contingency plans

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Source : Lancet British edition. 2005; 366 (9485) : 533-534
ISSN : 0140-6736
CODEN : LANCAO
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Type de document : comments
Nombre de références : 18 ref.

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

Descripteur(s) anglais
Descripteur(s) : Public health; World; Planning; Emergency; Operation; Medicine; Avian influenza; Influenzavirus AH5N1; Pandemic
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Sante publique; Monde; Planification; Urgence; Intervention; Medecine; Grippe aviaire; Influenzavirus AH5N1; Pandemie
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales
Localisation : INIST, Shelf number 5004, INIST No. 354000132423270040

Origine de la notice : INIST

050362977
PASCAL

Infection of the endothelium by influenza viruses : Vascular endothelium and infectious diseases: trick and treat

Titre : Infection of the endothelium by influenza viruses : Vascular endothelium and infectious diseases: trick and treat

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Source : Thrombosis and haemostasis. 2005; 94 (2) : 262-265
ISSN : 0340-6245
CODEN : THHADQ
Date de publication : 2005
Pays de publication : Germany
Langue(s) : English
Type de document : Serial
Nombre de références : 25 ref.

Résumé : Highly pathogenic avian influenza viruses are not only the cause of devastating "bird flu" outbreaks in domestic fowl, but are also occasionally the cause of human disease with a high mortality rate as is being currently observed with the H5N I viruses in South-East Asia. Infection in birds is systemic with hemorrhages and edema as characteristic symptoms, and virus replication in the endothelium appears to play an important role in pathogenesis. Some of the factors determining endotheliotropism have been elucidated at the molecular and cellular level.They include proteolytic activation of the hemagglutinin, polarity of virus budding, and tissue specific expression of virus receptors.

Code(s) de classement : 002B19C; 002A04I

Descripteur(s) anglais
Descripteur(s) : Infection; Endothelium; Influenza; Hemorrhage; Influenzavirus; Plague
Desc. génériques : Hematology; Medical sciences; Cell biology; Hematology; Biological sciences; Viral disease; Orthomyxoviridae; Virus; Yersiniosis; Bacteriosis
Descripteur(s) français
Descripteur(s) : Infection; Endothelium; Grippe; Hemorragie; Influenzavirus; Peste
Desc. génériques : Hematologie; Sciences medicales; Biologie cellulaire; Hematologie; Sciences biologiques; Virose; Orthomyxoviridae; Virus; Yersiniose; Bacteriose
Localisation : INIST, Shelf number 10255, INIST No. 354000138377610050

Origine de la notice : INIST

050362179
PASCAL

Dimeric zanamivir conjugates with various linking groups are potent, long-lasting inhibitors of influenza neuraminidase including H5N1 avian influenza

Titre : Dimeric zanamivir conjugates with various linking groups are potent, long-lasting inhibitors of influenza neuraminidase including H5N1 avian influenza

Auteur(s) : MACDONALD Simon J F; CAMERON Rachel; DEMAINE Derek A; FENTON Rob J; FOSTER Graham; GOWER David; HAMBLIN J Nicole; HAMILTON Stephanie; HART Graham J; HILL Alan P; INGLIS Graham G A; JIN Betty; JONES Haydn T; MCCONNELL Darryl B; MCKIMM BRESCHKIN Jennifer; MILLS Gail; NGUYEN Van; OWENS Ian J; PARRY Nigel; SHANAHAN Stephen E; SMITH Donna; WATSON Keith G; WU Wen Yang; TUCKER Simon P
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Source : Journal of medicinal chemistry Print. 2005; 48 (8) : 2964-2971
ISSN : 0022-2623
CODEN : JMCMAR
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 18 ref.

Résumé : The synthesis, antiviral and pharmacokinetic properties of zanamivir (ZMV) dimers 8 and 13 are described. The compounds are highly potent neuraminidase (NA) inhibitors which, along with dimer 3, are being investigated as potential second generation inhaled therapies both for the treatment of influenza and for prophylactic use. They show outstanding activity in a 1 week mouse influenza prophylaxis assay, and compared with ZMV, high concentrations of 8 and 13 are found in rat lung tissue after 1 week. Retention of compounds in rat lung tissue correlated both with molecular weight (excluding 3 and 15) and with a capacity factor K' derived from immobilized artificial membrane (IAM) chromatography (including 3 and 15). Pharmacokinetic parameters for 3, 8 and 13 in rats show the compounds have short to moderate plasma half-lives, low clearances and low volumes of distribution. Dimer 3 shows NA inhibitory activity against N1 viruses including the recent highly pathogenic H5N1 A/Chicken/Vietnam/8/2004. In plaque reduction assays, 3, 8 and 13 show good to outstanding potency against a panel of nine flu A and B virus strains. Consistent with its shorter and more rigid linking group, dimer 8 has been successfully crystallized.

Code(s) de classement : 002B02S05

Descripteur(s) anglais
Descripteur(s) : Dimer; Zanamivir; Conjugated compound; Long lasting; Enzyme inhibitor; Antiviral; Exo <alpha> sialidase; Chemical synthesis; Biological activity; Benzene derivatives; Carboxamide; Biphenyl derivatives; Guanidines; Aldonic acid; Organic carbamate; Avian influenzavirus; In vitro; Influenza; In vivo; Intravenous administration; Oral administration; Pharmacokinetics; Rat; Mouse; Prevention; Animal
Desc. génériques : Virology; Infectious diseases; Pharmacology; Medical sciences; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Influenzavirus A; Orthomyxoviridae; Virus; Viral disease; Infection; Rodentia; Mammalia; Vertebrata; Neuraminidase inhibitor
Descripteur(s) français
Descripteur(s) : Dimere; Zanamivir; Compose conjugue; Longue duree; Inhibiteur enzyme; Antiviral; Exo <alpha> sialidase; Synthese chimique; Activite biologique; Benzene derive; Carboxamide; Biphenyle derive; Guanidines; Acide aldonique; Carbamate organique; Influenzavirus aviaire; In vitro; Grippe; In vivo; Voie intraveineuse; Voie orale; Pharmacocinetique; Rat; Souris; Prevention; Animal; Terephtalamide derive

Desc. génériques : Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Influenzavirus A; Orthomyxoviridae; Virus; Virose; Infection; Rodentia; Mammalia; Vertebrata; Inhibiteur neuraminidase

050358853
PASCAL

Manufacturers face new challenges battling global threats

Titre : Manufacturers face new challenges battling global threats

Auteur(s) : WECHSLER Jill
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Source : Pharmaceutical technology 2003. 2005; 29 (8) : 24-32
ISSN : 1543-2521
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial

Résumé : Efforts to expand drug production capacity reflect fears of a pandemic flu outbreak, bioterrorism, and new infectious diseases.

Code(s) de classement : 002B02A03

Descripteur(s) anglais
Descripteur(s) : Manufacturer; Pharmaceutical technology
Desc. génériques : Pharmacology; Medical sciences
Descripteur(s) français
Descripteur(s) : Fabricant; Technologie pharmaceutique
Desc. génériques : Pharmacologie; Sciences medicales
Localisation : INIST, Shelf number 18915, INIST No. 354000131506110020

Origine de la notice : INIST

050333788
PASCAL

Characterization of a human H5N1 influenza A virus isolated in 2003

Titre : Characterization of a human H5N1 influenza A virus isolated in 2003

Auteur(s) : SHINYA Kyoko; HATTA Masato; YAMADA Shinya; TAKADA Ayato; WATANABE Shinji; HALFMANN Peter; HORIMOTO Taisuke; NEUMANN Gabriele; JIN HYUN KIM; LIM Wilina; YI GUAN; PEIRIS Malik; KISO Makoto; SUZUKI Takashi; SUZUKI Yasuo; KAWAOKA Yoshihiro
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Source : Journal of virology. 2005; 79 (15) : 9926-9932
ISSN : 0022-538X
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 33 ref.

Résumé : In 2003, H5N1 avian influenza virus infections were diagnosed in two Hong Kong residents who had visited the Fujian province in mainland China, affording us the opportunity to characterize one of the viral isolates, A/Hong Kong/213/03 (HK213; H5N1). In contrast to H5N1 viruses isolated from humans during the 1997 outbreak in Hong Kong, HK213 retained several features of aquatic bird viruses, including the lack of a deletion in the neuraminidase stalk and the absence of additional oligosaccharide chains at the globular head of the hemagglutinin molecule. It demonstrated weak pathogenicity in mice and ferrets but caused lethal infection in chickens. The original isolate failed to produce disease in ducks but became more pathogenic after five passages. Taken together, these findings portray the HK213 isolate as an aquatic avian influenza A virus without the molecular changes associated with the replication of H5N1 avian viruses in land-based poultry such as chickens. This case challenges the view that adaptation to land-based poultry is a prerequisite for the replication of aquatic avian influenza A viruses in humans.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Human; Influenza A virus; Microbiology; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Homme; Virus grippal A; Microbiologie; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13592, INIST No. 354000138598310540

Origine de la notice : INIST

Reducing the impact of viral respiratory infections in children. Pediatric infectious diseases

Titre : Reducing the impact of viral respiratory infections in children. Pediatric infectious diseases

Auteur(s) : MEISSNER H Cody; PROBER Charles G, ed
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Source : The Pediatric clinics of North America. 2005; 52 (3) : v, 695-710 [17 p.]
ISSN : 0031-3955
CODEN : PCNAA8
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 49 ref.

Résumé : This article reviews the epidemiology and clinical aspects of the major viral causes of upper and lower respiratory tract disease in children. Particular emphasis is placed on prevention and control of viral disease through the use of vaccines and antiviral agents. Evolution of new viral pathogens, such as avian influenza virus and the SARS-CoV, are discussed.

Code(s) de classement : 002B01

Descripteur(s) anglais
Descripteur(s) : Viral disease; Child; Pediatrics; Respiratory system infection
Desc. génériques : Medical sciences; Infection; Human; Respiratory disease
Descripteur(s) français
Descripteur(s) : Virose; Enfant; Pediatrie; Infection appareil respiratoire
Desc. génériques : Sciences medicales; Infection; Homme; Appareil respiratoire pathologie
Localisation : INIST, Shelf number 9064, INIST No. 354000138530570020

Origine de la notice : INIST

050308835
PASCAL

Final analysis of Netherlands avian influenza outbreaks reveals much higher levels of transmission to humans than previously thought

Titre : Final analysis of Netherlands avian influenza outbreaks reveals much higher levels of transmission to humans than previously thought

Auteur(s) : BOSMAN A; MEIJER A; KOOPMANS M
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Source : Euro surveillance. 2005; 10 (1-3) : 57-58
ISSN : 1025-496X
Date de publication : 2005
Pays de publication : France
Langue(s) : English
Type de document : Serial
Nombre de références : 7 ref.

Code(s) de classement : 002B30A01C; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Infection; Netherlands; Epidemic; Transmission; Human; Public health; Sanitary surveillance; Avian influenza
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Europe
Descripteur(s) français
Descripteur(s) : Infection; Pays Bas; Epidemie; Transmission; Homme; Sante publique; Surveillance sanitaire; Grippe aviaire
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Europe
Localisation : INIST, Shelf number 26438, INIST No. 354000138190820260

Origine de la notice : INIST

Results of survey of national influenza pandemic preparedness in Europe

Titre : Results of survey of national influenza pandemic preparedness in Europe

Auteur(s) : CIOTTI M; KARCHER F; GANTER B; TULL P
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Source : Euro surveillance. 2005; 10 (1-3) : 69-70
ISSN : 1025-496X
Date de publication : 2005
Pays de publication : France
Langue(s) : English
Type de document : Serial
Nombre de références : 2 ref.

Code(s) de classement : 002B30A01C; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza; Survey; Europe; Public health; Sanitary surveillance
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe; Enquete; Europe; Sante publique; Surveillance sanitaire
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 26438, INIST No. 354000138190820400

Origine de la notice : INIST

Considerable progress in European preparations for a potential influenza pandemic

Titre : Considerable progress in European preparations for a potential influenza pandemic

Auteur(s) : PAGET John
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ISSN : 1025-496X
Date de publication : 2005
Pays de publication : France
Langue(s) : English
Type de document : Serial
Nombre de références : 3 ref.

Code(s) de classement : 002B30A01C; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza A; Europe; Public health; Sanitary surveillance
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe A; Europe; Sante publique; Surveillance sanitaire
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 26438, INIST No. 354000138190820380

Origine de la notice : INIST

050297593
PASCAL

Infectious disease emergencies: role of the infectious disease specialist. Progress Towards Meeting the Challenges in Clinical Microbiology and Infectious Diseases. A Workshop of the European Society of Clinical Microbiology and Infectious Diseases

Titre : Infectious disease emergencies: role of the infectious disease specialist. Progress Towards Meeting the Challenges in Clinical Microbiology and Infectious Diseases. A Workshop of the European Society of Clinical Microbiology and Infectious Diseases

Auteur(s) : NORRBY S Ragnar; STRUELENS M, ed; VAN ELDERE J, ed; NORRBY R, ed; NAGY E, ed
Auteur(s) : European Society of Clinical Microbiology and Infectious Diseases ESCMID, Europe, patr.
Affiliation(s) : Swedish Institute for Infectious Disease Control, Solna, Sweden; Department of Microbiology, universite libre de Bruxelles, hopital Erasme, Brussels, Belgium; Department of Microbiology and Immunology, Universitaire Ziekenhuizen Gasthuisberg, Katholieke Universiteit Leuven, Leuven, Belgium

Source : Clinical microbiology and infection Supplement. 2005; 11 (1) : 9-11
Informations congrès : *Workshop of the European Society of Clinical Microbiology and Infectious Diseases, *Leuven Belgium, *2004-03-17
ISSN : 1470-9465
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial; *Conference-Meeting
Nombre de références : 2 ref.

Résumé : The importance of infections for public health has become obvious during the last decades. Examples are emerging infections such as HIV/AIDS and severe acute respiratory syndrome, deliberate release of microorganisms, such as the anthrax episode in the USA, the increasing problems with organisms resistant to antimicrobial treatment, such as methicillin-resistant Staphylococcus aureus, and the threat of a new influenza pandemic with a case fatality rate similar to that in the 1918 outbreak. An effective response to infectious disease emergencies requires careful planning and establishment of resources in advance. The medical specialties involved are clinical microbiology, clinical infectious diseases and epidemiology. Clinical microbiology should include bacteriology, virology and parasitology; the technical developments during the last 15 years have clearly erased most of the methodological differences between these branches of microbiology. New techniques such as new generations of Polymerase Chain Reaction (PCR), rapid methods for nucleic acid sequence analyses and microarrays have enabled more rapid identification of organisms and provide powerful tools in the epidemiological analysis of an outbreak. The infectious disease specialists are necessary for rapid and adequate clinical diagnoses, optimal use of antimicrobial agents and provision of facilities for containment of patients who may spread the infections. The need for isolation units became acute when many countries prepared themselves for a possible severe acute respiratory syndrome outbreak in Europe. With few exceptions, Europe still lacks epidemiological field forces, and it has been embarrassing to be obliged to call upon the Centers for Disease Control for European outbreaks. Hopefully, this will be corrected with the creation of the European Centre for Disease Prevention and Control (ECDC).

Code(s) de classement : 002B05C02D; 002B05C02C; 002B05B02P

Descripteur(s) anglais
Descripteur(s) : Infection; Emerging disease; AIDS; Microbiological investigation; Polymerase chain reaction; Antibacterial agent; Emergency; Drug susceptibility test; Epidemic; Staphylococcus aureus; Human; Microbiology; Severe acute respiratory syndrome; Occupational role; Anthrax; United States; Antimicrobial agent; Treatment; Staphylococcal infection; Influenza A; Planning; Medical specialty; Epidemiology; Comparative study; Method
Desc. génériques : Hematology; Virology; Infectious diseases; Medical sciences; Virology; Infectious diseases;

Medical sciences; Bacteriology; Infectious diseases; Medical sciences; Viral disease; Micrococcaceae; Micrococcales; Bacteria; Bacteriosis; North America; America; Immune deficiency; Immunopathology; Respiratory disease; Lung disease; Molecular biology

Descripteur(s) français

Descripteur(s) : Infection; Maladie emergente; SIDA; Exploration microbiologique; Reaction chaine polymerase; Antibacterien; Urgence; Test sensibilite medicamenteuse; Epidemie; Staphylococcus aureus; Homme; Microbiologie; Syndrome respiratoire aigu severe; Role professionnel; Charbon bacteridien; Etats Unis; Antimicrobien; Traitement; Staphylococcie; Grippe A; Planification; Specialite medicale; Epidemiologie; Etude comparative; Methode; Souche resistante meticilline

Desc. génériques : Hematologie; Virologie; Maladies infectieuses; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Bacteriologie; Maladies infectieuses; Sciences medicales; Virose; Micrococcaceae; Micrococcales; Bacterie; Bacteriose; Amerique du Nord; Amerique; Immunodeficit; Immunopathologie; Appareil respiratoire pathologie; Poumon pathologie; Biologie moleculaire

Localisation : INIST, Shelf number 26593S, INIST No. 354000126837030020

Origine de la notice : INIST

050267513
PASCAL

Avian influenza viruses and their implication for human health

Titre : Avian influenza viruses and their implication for human health

Auteur(s) : KAYE Donald; PRINGLE Craig R
Affiliation(s) : Drexel University, College of Medicine, Philadelphia, Pennsylvania, United States; ProMED mail, International Society for Infectious Diseases, Boston, Massachusetts, United States; Biological Sciences Department, University of Warwick, United Kingdom

Source : Clinical infectious diseases. 2005; 40 (1) : 108-112
ISSN : 1058-4838
CODEN : CIDIEL
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 40 ref.

Résumé : Widespread outbreaks of avian influenza in domestic fowl throughout eastern Asia have reawakened concern that avian influenza viruses may again cross species barriers to infect the human population and thereby initiate a new influenza pandemic. Simultaneous infection of humans (or swine) by avian influenza viruses in the presence of human influenza viruses could theoretically generate novel influenza viruses with pandemic potential as a result of reassortment of genome subunits between avian and mammalian influenza viruses. These hybrid viruses would have the potential to express surface antigens from avian viruses to which the human population has no preexisting immunity. This article reviews current knowledge of the routes of transmission of avian influenza A viruses to humans, places the risk of appearance of a new pandemic influenza virus in perspective, and describes the recently observed epidemiology and clinical syndromes of avian influenza in humans.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Infection; Epidemic; Asia; Influenza A; Human; Mammalia; Influenza A virus; Genome; Subunit; Surface; Antigen; Bibliographic review; Knowledge; Transmission; Risk factor; Epidemiology; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Infection; Epidemie; Asie; Grippe A; Homme; Mammalia; Virus grippal A; Genome; Sousunite; Surface; Antigene; Revue bibliographique; Connaissance; Transmission; Facteur risque; Epidemiologie; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 18407, INIST No. 354000127032460130

Origine de la notice : INIST

050254834
PASCAL

Vietnam needs cash to stave off future outbreaks of bird flu

Titre : Vietnam needs cash to stave off future outbreaks of bird flu

Auteur(s) : WATTS Jonathan
Source : Lancet British edition. 2005; 365 (9473) : 1759-1760
ISSN : 0140-6736
CODEN : LANCAO
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial

Résumé : Mortality rates for avian influenza are starting to drop as doctors in Vietnam gain experience of the disease. But health workers warn that a new outbreak will cripple the country unless the cash to fund much-needed laboratory improvements appears. Jonathan Watts reports from Vietnam.

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

Descripteur(s) anglais
Descripteur(s) : Vietnam; Need; Epidemic; Public health; Medicine; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Asia
Descripteur(s) français
Descripteur(s) : Vietnam; Besoin; Epidemie; Sante publique; Medecine; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Asie
Localisation : INIST, Shelf number 5004, INIST No. 354000124753990030

Origine de la notice : INIST

050253507
PASCAL

Virus emergents ou menaces a repetition; Emergent viruses and/or repeated threats

Titre : Virus emergents ou menaces a repetition; Emergent viruses and/or repeated threats

Auteur(s) : LINA B
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Source : Antibiotiques Paris. 2005; 7 (2) : 106-110
ISSN : 1294-5501
Date de publication : 2005
Pays de publication : France
Langue(s) : French
Langue(s) du résumé : English
Type de document : Serial
Nombre de références : 26 ref.

Résumé : Les virus emergents ont defraye la chronique durant les annees 2003 et 2004. A cette occasion sont reapparues les peurs antiques concernant l' apparition d' un agent infectieux hautement pathogene, pouvant provoquer des epidemies associees a une mortalite elevee. Ces phenomenes sont clairement des menaces a repetition. L' analyse des mecanismes ayant permis l' apparition de ces virus montre que pour chaque virus emergent decrit, il ne s' agit en aucun cas de phenomenes purement aleatoires, mais bien de l' accumulation de facteurs qui permettent a ces agents infectieux de diffuser de l' animal vers l' homme. Differents modes d' infection existent, soit par transmission directe, soit par l' intermediaire des vecteurs (moustiques, tiques ou autres animaux). La conjonction de facteurs ecologiques, economiques et epidemiologiques font que ces epidemies naissent et eventuellement diffusent. Grace au developpement des reseaux de surveillance et a l' amelioration des techniques diagnostiques, les virus responsables de ces epidemies sont mieux identifies. Les experiences recentes du SRAS et de la grippe aviaire en sont les meilleurs exemples.

Code(s) de classement : 002B05C02J

Descripteur(s) anglais
Descripteur(s) : Virus; Public health; Epidemic; Transmission mode; Network; Severe acute respiratory syndrome; Sanitary surveillance; Human; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Respiratory disease; Lung disease
Descripteur(s) français
Descripteur(s) : Virus; Sante publique; Epidemie; Mode transmission; Reseau; Syndrome respiratoire aigu severe; Surveillance sanitaire; Homme; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Appareil respiratoire pathologie; Poumon pathologie
Localisation : INIST, Shelf number 26977, INIST No. 354000125530050050

Origine de la notice : INIST

050248000
PASCAL

A veterinarian's experience of the spring 2004 avian influenza outbreak in Laos

Titre : A veterinarian's experience of the spring 2004 avian influenza outbreak in Laos

Auteur(s) : WITT Clara J; MALONE Joseph L
Affiliation(s) : Department of Defense Global Emerging Infections System, WRAIR 503 Robert Grant Ave, Silver Spring, MD 20910, United States

Source : Lancet Infectious diseases print. 2005; 5 (3) : 143-145
ISSN : 1473-3099
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial

Résumé : Since it was first reported in December 2003, the outbreak of avian influenza A/H5N1 has spread to at least nine countries in Asia, affected multiple species of animals, and caused at least 42 human deaths. The magnitude and extent of this zoonotic outbreak are unprecedented, continue to grow, and threaten the start of a global human influenza pandemic. Control of the H5N1 outbreak has required the implementation of integrated human and veterinary health surveillance and response efforts. These efforts have also necessitated an unprecedented level of bilateral and multilateral international communication and cooperation. This report describes the contribution of one public-health veterinarian to the H5N1 outbreak response effort in Laos, and emphasises the value of multidisciplinary approaches to addressing this and future emerging infectious disease outbreaks. CJW is a US Public Health Service Commissioned Corps veterinarian and Deputy Director for Antimicrobial Resistance, Zoonotic, and Vectorborne Disease Surveillance, Department of Defense Global Emerging Infections Systems (DoD-GEIS), MD, USA; andJLM is in the US Navy Medical Corps, and Director, DoD-GEIS. Correspondence to: Dr Clara Witt, Department of Defense Global Emerging Infections System, WRAIR 503 Robert Grant Ave, Silver Spring, MD 20910, USA. clara.witt@na.amedd.army.mil The views expressed are those of the authors and should not be construed to represent the positions of the Department of Defense, or the Department of Health and Human Services. We have no conflicts of interest.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Emerging disease; Infection; Epidemic; Laos; Veterinary medicine; Animal; Human; Aves; Mortality; Check; Implementation; Surveillance; International cooperation; Communication; Health service; Drug susceptibility test; Defense; United States; Army; Interest; Influenzavirus A; Prognosis; Avian influenza; Influenzavirus A and <Hash>40;H5N1 and <Hash>41;
Desc. génériques : Virology; Infectious diseases; Medical sciences; Asia; Vertebrata; North America; America; Orthomyxoviridae; Virus; Prevention
Descripteur(s) français
Descripteur(s) : Maladie emergente; Infection; Epidemie; Laos; Medecine veterinaire; Animal; Homme; Aves; Mortalite; Controle; Implementation; Surveillance; Cooperation internationale; Communication; Service sante; Test sensibilite medicamenteuse; Defense organisme; Etats Unis; Armee; Interet; Influenzavirus A; Pronostic; Grippe aviaire; Influenzavirus AH5N1
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Asie; Vertebrata; Amerique du Nord; Amerique; Orthomyxoviridae; Virus; Prevention
Localisation : INIST, Shelf number 27478, INIST No. 354000127017940010

Origine de la notice : INIST

050247938
PASCAL

Avian influenza and sialic acid receptors: more than meets the eye?

Titre : Avian influenza and sialic acid receptors: more than meets the eye?

Auteur(s) : OLOFSSON Sigvard; KUMLIN Urban; DIMOCK Ken; ARNBERG Niklas
Affiliation(s) : Department of Clinical Virology, University of Goteborg, Goteborg, Sweden; Department of Virology, Institute of Clinical Microbiology, Umea University, Umea, Sweden; Department of Biochemistry, Microbiology and Immunology, University of Ottawa, Ottawa, Ontario, Canada

Source : Lancet Infectious diseases print. 2005; 5 (3) : 184-188
ISSN : 1473-3099
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 76 ref.

Résumé : Given our recent discoveries that the ocular human pathogens adenovirus serotype 37 and enterovirus serotype 70 use sialic acid linked to galactose via <alpha>2,3 glycosidic bonds as a cellular receptor, we propose that the presence of this receptor in the eye also explains the ocular tropism exhibited by zoonotic avian influenza A viruses such as subtype H5N1 in Hong Kong in 1997, H7N7 in the Netherlands in 2003, H7N2 in the USA in 2003, and H7N3 in Canada in 2004. We also draw attention to the implications this hypothesis may have for epizootic and zoonotic influenza, and the initiation of future pandemics.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Sialic acid; Microbiological investigation; Eye; Serotype; Typing; Human adenovirus; Enterovirus 70; Galactose; Tropism; Influenza A; Subtype; Hong Kong; Netherlands; United States; Canada; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences; Mastadenovirus; Adenoviridae; Virus; Enterovirus; Picornaviridae; Viral disease; Infection; China; Asia; Europe; North America; America
Descripteur(s) français
Descripteur(s) : Sialique acide; Exploration microbiologique; Oeil; Serotype; Typage; Adenovirus humain; Enterovirus 70; Galactose; Tropisme; Grippe A; Soustype; Hong Kong; Pays Bas; Etats Unis; Canada; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Mastadenovirus; Adenoviridae; Virus; Enterovirus; Picornaviridae; Virose; Infection; Chine; Asie; Europe; Amerique du Nord; Amerique
Localisation : INIST, Shelf number 27478, INIST No. 354000127017940060

Origine de la notice : INIST

050236081
PASCAL

Cross-reactivity to highly pathogenic avian influenza H5N1 viruses after vaccination with Nonadjuvanted and MF59-adjuvanted influenza A/Duck/Singapore/97 (H5N3) vaccine : A potential priming strategy. Commentary

Titre : Cross-reactivity to highly pathogenic avian influenza H5N1 viruses after vaccination with Nonadjuvanted and MF59-adjuvanted influenza A/Duck/Singapore/97 (H5N3) vaccine : A potential priming strategy. Commentary

Auteur(s) : SCHWARTZ Benjamin, comment; GELLIN Bruce, comment; STEPHENSON Iain; BUGARINI Roberto; NICHOLSON Karl G; PODDA Audino; WOOD John M; ZAMBON Maria C; KATZ Jacqueline M
Affiliation(s) : National Vaccine Program Office, Department of Health and Human Services, Washington, DC, United States; Influenza Branch, Centers for Disease Control and Prevention, Atlanta, Georgia, United States; Infectious Diseases Unit, Leicester Royal Infirmary, Leicester, United Kingdom; Chiron Vaccines, Siena, Italy; National Institute for Biological Standards and Control, Potters Bar, United Kingdom; Central Public Health Laboratory, Health Protection Agency, Colindale, United Kingdom

Source : The Journal of infectious diseases. 2005; 191 (8) : 1207-1209,1210-1215 [9 p.]
ISSN : 0022-1899
CODEN : JIDIAQ
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : short-communication; comments
Nombre de références : 30 ref.

Résumé : Antigenically well-matched vaccines against highly pathogenic avian influenza H5N1 viruses are urgently required. Human serum samples after immunization with MF59 or nonadjuvanted A/duck/Singapore/97 (H5N3) vaccine were tested for antibody to 1997-2004 human H5N1 viruses. Antibody responses to 3 doses of nonadjuvanted vaccine were poor and were higher after MF59-adjuvanted vaccine, with seroconversion rates to A/HongKong/156/97, A/HongKong/213/03, A/Thailand/16/04, and A/Vietnam/1203/04 of 100% (P<.0001), 100% (P<.0001), 71% (P =.0004), and 43% (P =.0128) in 14 subjects, respectively, compared with 27%, 27%, 0%, and 0% in 11 who received nonadjuvanted vaccine. These findings have implications for the rational design of pandemic vaccines against influenza H5.

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

Descripteur(s) anglais
Descripteur(s) : Cross reaction; Pathogenicity; Vaccination; Immunological adjuvant; Singapore; Vaccine; Microbiology; Infection; Influenza A; Avian influenza
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Infectious diseases; Medical sciences; Asia; Viral disease
Descripteur(s) français
Descripteur(s) : Reaction croisee; Pouvoir pathogene; Vaccination; Adjuvant immunologique; Singapour; Vaccin; Microbiologie; Infection; Grippe A; Grippe aviaire
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Asie; Virose
Localisation : INIST, Shelf number 2052, INIST No. 354000129561090010

Origine de la notice : INIST

050235619
PASCAL

Efficacy of H5 influenza vaccines produced by reverse genetics in a lethal mouse model. Commentary

Titre : Efficacy of H5 influenza vaccines produced by reverse genetics in a lethal mouse model. Commentary

Auteur(s) : SCHWARTZ Benjamin, comment; GELLIN Bruce, comment; LIPATOV Aleksandr S; WEBBY Richard J; GOVORKOVA Elena A; KRAUSS Scott; WEBSTER Robert G
Affiliation(s) : National Vaccine Program Office, Department of Health and Human Services, Washington, DC, United States; Division of Virology, Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, Tennessee, United States

Source : The Journal of infectious diseases. 2005; 191 (8) : 1207-1209,1216-1220 [8 p.]
ISSN : 0022-1899
CODEN : JIDIAQ
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : short-communication; comments
Nombre de références : 31 ref.

Résumé : We studied the efficacy, in mice, of 2 H5 influenza vaccine viruses produced by reverse genetics. Mice were immunized with inactivated viruses and then inoculated with a human H5N1 1997 or 2003 virus or an avian H5N1 2001 virus. Vaccine viruses that we tested raised high levels of hemagglutination-inhibiting (1:160-1:1280) and virus-neutralizing (1:900-1: 1900) antibodies on day 21 after a single dose of vaccine and decreased or prevented virus replication in mouse lungs; 54.5%-100% of immunized mice survived, whereas all control mice died. Protection was achieved despite antigenic differences and incomplete matching of the vaccine strain and the challenge virus. Therefore, high levels of cross-protection are predicted in the mouse model.

Code(s) de classement : 002A05; 002B05

Descripteur(s) anglais
Descripteur(s) : Efficiency; Genetic vaccine; Animal model; Microbiology; Infection; Influenza
Desc. génériques : Microbiology; Biological sciences; Infectious diseases; Medical sciences; Viral disease
Descripteur(s) français
Descripteur(s) : Efficacite; Vaccin genetique; Modele animal; Microbiologie; Infection; Grippe
Desc. génériques : Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Virose
Localisation : INIST, Shelf number 2052, INIST No. 354000129561090020

Origine de la notice : INIST

050233896
PASCAL

Se Preparer a l' eventualite d' une pandemie grippale

Titre : Se Preparer a l' eventualite d' une pandemie grippale

Auteur(s) : CHEMARDIN J; LE QUELLEC NATHAN M; DEUTSCH P; ESCOUROLLE D; POSTEL VINAY N; COQUIN Y; HOUSSIN D
Affiliation(s) : Direction generale de la Sante, 14 avenue Duquesne, 75007 Paris, France

Source : La Revue du praticien Paris. 2005; 55 (7) : 701-702
ISSN : 0035-2640
CODEN : REPRA3
Date de publication : 2005
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : 5 ref.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Medicine; Public health; Sanitary surveillance; Influenza; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Medecine; Sante publique; Surveillance sanitaire; Grippe; Pandemie; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 4317, INIST No. 354000127150590010

Origine de la notice : INIST

Acylation-mediated membrane anchoring of avian influenza virus hemagglutinin is essential for fusion pore formation and virus infectivity

Titre : Acylation-mediated membrane anchoring of avian influenza virus hemagglutinin is essential for fusion pore formation and virus infectivity

Auteur(s) : WAGNER Ralf; HERWIG Astrid; AZZOUZ Nahid; KLENK Hans Dieter
Affiliation(s) : Institut fur Virologie, Philipps-Universitdt, 35011 Marburg, Germany

Source : Journal of virology. 2005; 79 (10) : 6449-6458
ISSN : 0022-538X
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 58 ref.

Résumé : Attachment of palmitic acid to cysteine residues is a common modification of viral glycoproteins. The influenza virus hemagglutinin (HA) has three conserved cysteine residues at its C terminus serving as acylation sites. To analyze the structural and functional roles of acylation, we have generated by reverse genetics a series of mutants (Acl, Ac2, and Ac3) of fowl plague virus (FPV) containing HA in which the acylation sites at positions 551, 559, and 562, respectively, have been abolished. When virus growth in CV1 and MDCK cells was analyzed, similar amounts of virus particles were observed with the mutants and the wild type. Protein patterns and lipid compositions, characterized by high cholesterol and glycolipid contents, were also indistinguishable. However, compared to wild-type virus, Ac2 and Ac3 virions were 10 and almost 1,000 times less infectious, respectively. Fluorescence transfer experiments revealed that loss of acyl chains impeded formation of fusion pores, whereas hemifusion was not affected. When the affinity to detergent-insoluble glycolipid (DIG) domains was analyzed by Triton X-100 treatment of infected cells and virions, solubilization of Ac2 and Ac3 HAs was markedly facilitated. These observations show that acylation of the cytoplasmic tail, while not necessary for targeting to DIG domains, promotes the firm anchoring and retention of FPV HA in these domains. They also indicate that tight DIG association of FPV HA is essential for formation of fusion pores and thus probably for infectivity.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Hemagglutinin; Infectivity; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus; Hemagglutinine; Pouvoir infectant; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13592, INIST No. 354000129572140550

Origine de la notice : INIST

050210783
PASCAL

Grippe aviaire. Comment se preparer au pire

Titre : Grippe aviaire. Comment se preparer au pire

Auteur(s) : VERGERON Nathalie
Source : ALTERNATIVE SANTE L'IMPATIENT. 2005-03; (320) : 9-14
ISSN : 1285-4778
Date de publication : 2005
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : 3 ref.

Résumé : Le virus de la grippe du poulet fait des ravages dans les elevages d' Asie du Sud-Est. Selon les experts, il peut, a tout moment, s' adapter a l' homme et provoquer une pandemie susceptible de tuer des dizaines, voire des centaines de millions de personnes

Code(s) de classement : 002B30A01

Descripteur(s) anglais
Descripteur(s) : Virus; Influenza; Rearing; Epidemic; South east Asia; Communicable disease; Contagion; France; Vaccine; Antiviral; Developing countries; Recommendation; Vaccination; Statistical data; Epidemiology; Sanitary surveillance; Epizootics
Desc. génériques : Public health; Medical sciences; Viral disease; Infection; Asia; Europe
Descripteur(s) français
Descripteur(s) : Virus; Grippe; Elevage; Epidemie; Asie du sud est; Maladie contagieuse; Contagion; France; Vaccin; Antiviral; Pays en developpement; Recommandation; Vaccination; Donnee statistique; Epidemiologie; Surveillance sanitaire; Epizootie
Desc. génériques : Sante publique; Sciences medicales; Virose; Infection; Asie; Europe
Localisation : BDSP/ENSP, Shelf number 141430

Origine de la notice : BDSP

050206855
PASCAL

Grippe aviaire : un virus en embuscade; Avarian flu: a virus waiting in ambush

Titre : Grippe aviaire : un virus en embuscade; Avarian flu: a virus waiting in ambush

Auteur(s) : TOLOU H
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Source : Medecine tropicale. 2005; 65 (1) : 25-26
ISSN : 0025-682X
CODEN : METRA2
Date de publication : 2005
Pays de publication : France
Langue(s) : French
Type de document : Serial
Nombre de références : 5 ref.

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

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Tropical medicine; Review; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Medecine tropicale; Article synthese; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 5090, INIST No. 354000125306800030

Origine de la notice : INIST

050205127
PASCAL

Latex agglutination test for monitoring antibodies to avian influenza virus subtype H5N1

Titre : Latex agglutination test for monitoring antibodies to avian influenza virus subtype H5N1

Auteur(s) : XIAOJUAN XU; MEILIN JIN; ZHENGJUN YU; HONGCHAO LI; DEXIN QIU; YADI TAN; HUANCHUN CHEN
Affiliation(s) : Laboratory of Animal Virology, College of Veterinary Medicine, and Unit of Animal Infectious Diseases, National Key Laboratory of Agricultural Microbiology, China; Huazhong Agricultural University, Wuhan, Hubei Province, China

Source : Journal of clinical microbiology Print. 2005; 43 (4) : 1953-1955
ISSN : 0095-1137
CODEN : JCMIDW
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 9 ref.

Résumé : A latex agglutination test (LAT) based on polystyrene beads sensitized with inactivated avian influenza virus H5N1 particles was developed. Compared with the hemagglutination inhibition test, the sensitivity and specificity of the LAT were 88.8 and 97.6%, respectively, in detecting 830 serum samples from vaccinated chickens. The test has application potential in field practice.

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

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Latex agglutination test; Antibody; Subtype; Microbiology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Infectious diseases; Medical sciences; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus; Test agglutination latex; Anticorps; Soustype; Microbiologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 17088, INIST No. 354000127152160730

Origine de la notice : INIST

050193659
PASCAL

In vitro demonstration of neural transmission of avian influenza A virus

Titre : In vitro demonstration of neural transmission of avian influenza A virus

Auteur(s) : MATSUDA Kazuya; SHIBATA Takuma; SAKODA Yoshihiro; KIDA Hiroshi; KIMURA Takashi; OCHIAI Kenji; UMEMURA Takashi
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Source : Journal of general virology. 2005; 86 (p.4) : 1131-1139
ISSN : 0022-1317
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Langue(s) : English
Type de document : Serial
Nombre de références : 1 p.1/4

Résumé : Neural involvement following infections of influenza viruses can be serious. The neural transport of influenza viruses from the periphery to the central nervous system has been indicated by using mouse models. However, no direct evidence for neuronal infection has been obtained in vitro and the mechanisms of neural transmission of influenza viruses have not been reported. In this study, the transneural transmission of a neurotropic influenza A virus was examined using compartmentalized cultures of neurons from mouse dorsal root ganglia, and the results were compared with those obtained using the pseudorabies virus, a virus with well-established neurotransmission. Both viruses reached the cell bodies of the neurons via the axons. This is the first report on axonal transport of influenza A virus in vitro. In addition, the role of the cytoskeleton (microtubules, microfilaments and intermediate filaments) in the neural transmission of influenza virus was investigated by conducting cytoskeletal perturbation experiments. The results indicated that the transport of avian influenza A virus in the neurons was independent of microtubule integrity but was dependent on the integrity of intermediate filaments, whereas pseudorabies virus needed both for neural spread.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenza A virus; Transmission; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Virus grippal A; Transmission; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 13533, INIST No. 354000127142920260

Origine de la notice : INIST

050192828
PASCAL

Pathogenesis of Hong Kong H5N1 influenza virus NS gene reassortants in mice : the role of cytokines and B- and T-cell responses

Titre : Pathogenesis of Hong Kong H5N1 influenza virus NS gene reassortants in mice : the role of cytokines and B- and T-cell responses

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Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 1 p.1/4

Résumé : The severity of disease caused in humans by H5N1 influenza viruses remains unexplained. The NS gene of Hong Kong H5N1/97 viruses was shown to contribute to high pathogenicity of reassortants in a pig model. However, the molecular pathogenesis and host immune response underlying this phenomenon remain unclear. Here, in a mouse model, H1N1 A/Puerto Rico/8/34 (PR/8) reassortants that contained the H5N1/97 NS gene, the H5N1/01 NS gene, or an altered H5N1/97 NS gene encoding a Glu<sub>9<sub>2<chemical reaction>Asp substitution in NS1 was studied. The pathogenicity of reassortant viruses, the induction of cytokines and chemokine CXCL1 (KC) in the lungs and specific B- and T-cell responses was characterized. In mice infected with reassortant virus containing the H5N1/97 NS gene, the mouse lethal dose (50%) and lung virus titres were similar to those of PR/8, which is highly pathogenic to mice. This reassortant virus required two more days than PR/8 to be cleared from the lungs of infected mice. Reassortants containing the altered H5N1/97 NS gene or the H5N1/01 NS gene demonstrated attenuated pathogenicity and lower lung titres in mice. Specific B- and T-cell responses were consistent with viral pathogenicity and did not explain the delayed clearance of the H5N1/97 NS reassortant. The reassortant induced elevated pulmonary concentrations of the inflammatory cytokines IL1<alpha>, IL1<beta>, IL6, IFN-y and chemokine KC, and decreased concentrations of the anti-inflammatory cytokine IL10. This cytokine imbalance is reminiscent of the clinical findings in two humans who died of H5N1/97 infection and may explain the unusual severity of the disease.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Influenzavirus; Mouse; Pathogenesis; Hong Kong; Gene; Cytokine; B Lymphocyte; Cellular immunity; Microbiology; Virology; Genetic reassortment
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata; China; Asia
Descripteur(s) français
Descripteur(s) : Influenzavirus; Souris; Pathogenie; Hong Kong; Gene; Cytokine; Lymphocyte B; Immunite cellulaire; Microbiologie; Virologie; Reassortiment genetique
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata; Chine; Asie

050175933
PASCAL

Isolation and characterization of avian influenza viruses, including highly pathogenic H5N1, from poultry in live bird markets in Hanoi, Vietnam, in 2001

Titre : Isolation and characterization of avian influenza viruses, including highly pathogenic H5N1, from poultry in live bird markets in Hanoi, Vietnam, in 2001

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Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 67 ref.

Résumé : Since 1997, outbreaks of highly pathogenic (HP) H5N1 and circulation of H9N2 viruses among domestic poultry in Asia have posed a threat to public health. To better understand the extent of transmission of avian influenza viruses (AIV) to humans in Asia, we conducted a cross-sectional virologic study in live bird markets (LBM) in Hanoi, Vietnam, in October 2001. Specimens from 189 birds and 18 environmental samples were collected at 10 LBM. Four influenza A viruses of the H4N6 (n = 1), H5N2 (n = 1), and H9N3 (n = 2) subtypes were isolated from healthy ducks for an isolation frequency of over 30% from this species. Two H5N1 viruses were isolated from healthy geese. The hemagglutinin (HA) genes of these H5N1 viruses possessed multiple basic amino acid motifs at the cleavage site, were HP for experimentally infected chickens, and were thus characterized as HP AIV. These HA genes shared high amino acid identities with genes of other H5N1 viruses isolated in Asia during this period, but they were genetically distinct from those of H5N1 viruses isolated from poultry and humans in Vietnam during the early 2004 outbreaks. These viruses were not highly virulent for experimentally infected ducks, mice, or ferrets. These results establish that HP H5N1 viruses with properties similar to viruses isolated in Hong Kong and mainland China circulated in Vietnam as early as 2001, suggest a common source for H5N1 viruses circulating in these Asian countries, and provide a framework to better understand the recent widespread emergence of HP H5N1 viruses in Asia.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Aves; Isolation; Pathogenicity; Poultry; Vietnam; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Vertebrata; Asia; Veterinary
Descripteur(s) français
Descripteur(s) : Aves; Isolement; Pouvoir pathogene; Volaille; Vietnam; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Vertebrata; Asie; Veterinaire
Localisation : INIST, Shelf number 13592, INIST No. 354000125041980300

Origine de la notice : INIST

050160112
PASCAL

Characterization of a novel influenza A virus hemagglutinin subtype (H16) obtained from black-headed gulls

Titre : Characterization of a novel influenza A virus hemagglutinin subtype (H16) obtained from black-headed gulls

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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 36 ref.

Résumé : In wild aquatic birds and poultry around the world, influenza A viruses carrying 15 antigenic subtypes of hemagglutinin (HA) and 9 antigenic subtypes of neuraminidase (NA) have been described. Here we describe a previously unidentified antigenic subtype of HA (H16), detected in viruses circulating in black-headed gulls in Sweden. In agreement with established criteria for the definition of antigenic subtypes, hemagglutination inhibition assays and immunodiffusion assays failed to detect specific reactivity between H16 and the previously described subtypes H1 to H15. Genetically, H16 HA was found to be distantly related to H13 HA, a subtype also detected exclusively in shorebirds, and the amino acid composition of the putative receptor-binding site of H13 and H16 HAs was found to be distinct from that in HA subtypes circulating in ducks and geese. The H16 viruses contained NA genes that were similar to those of other Eurasian shorebirds but genetically distinct from N3 genes detected in other birds and geographical locations. The European gull viruses were further distinguishable from other influenza A viruses based on their PB2, NP, and NS genes. Gaining information on the full spectrum of avian influenza A viruses and creating reagents for their detection and identification will remain an important task for influenza surveillance, outbreak control, and animal and public health. We propose that sequence analyses of HA and NA genes of influenza A viruses be used for the rapid identification of existing and novel HA and NA subtypes.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Influenza A virus; Larus ridibundus; Hemagglutinin; Subtype; Microbiology; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Aves; Vertebrata
Descripteur(s) français
Descripteur(s) : Virus grippal A; Larus ridibundus; Hemagglutinine; Soustype; Microbiologie; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Aves; Vertebrata
Localisation : INIST, Shelf number 13592, INIST No. 354000126298540170

Origine de la notice : INIST

050158349
PASCAL

Characterization of highly pathogenic H5N1 avian influenza A viruses isolated from South Korea

Titre : Characterization of highly pathogenic H5N1 avian influenza A viruses isolated from South Korea

Auteur(s) : LEE Chang Won; SUAREZ David L; TUMPEY Terrence M; SUNG Haan Woo; KWON Yong Kuk; LEE Youn Jeong; CHOI Jun Gu; JOH Seong Joon; KIM Min Chul; LEE Eun Kyoung; PARK Jong Myung; XIUHUA LU; KATZ Jacqueline M; SPACKMAN Erica; SWAYNE David E; KIM Jae Hong
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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 50 ref.

Résumé : An unprecedented outbreak of H5N1 highly pathogenic avian influenza (HPAI) has been reported for poultry in eight different Asian countries, including South Korea, since December 2003. A phylogenetic analysis of the eight viral genes showed that the H5N1 poultry isolates from South Korea were of avian origin and contained the hemagglutinin and neuraminidase genes of the A/goose/Guangdong/1/96 (Gs/Gd) lineage. The current H5N1 strains in Asia, including the Korean isolates, share a gene constellation similar to that of the Penfold Park, Hong Kong, isolates from late 2002 and contain some molecular markers that seem to have been fixed in the Gs/Gd lineage virus since 2001. However, despite genetic similarities among recent H5N1 isolates, the topology of the phylogenetic tree clearly differentiates the Korean isolates from the Vietnamese and Thai isolates which have been reported to infect humans. A representative Korean isolate was inoculated into mice, with no mortality and no virus being isolated from the brain, although high titers of virus were observed in the lungs. The same isolate, however, caused systemic infections in chickens and quail and killed all of the birds within 2 and 4 days of intranasal inoculation, respectively. This isolate also replicated in multiple organs and tissues of ducks and caused some mortality. However, lower virus titers were observed in all corresponding tissues of ducks than in chicken and quail tissues, and the histological lesions were restricted to the respiratory tract. This study characterizes the molecular and biological properties of the H5N1 HPAI viruses from South Korea and emphasizes the need for comparative analyses of the H5N1 isolates from different countries to help elucidate the risk of a human pandemic from the strains of H5N1 HPAI currently circulating in Asia.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Pathogenicity; South Korea; Microbiology; Virology; Influenza A; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Korea; Asia; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Pouvoir pathogene; Coree du Sud; Microbiologie; Virologie; Grippe A; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Coree; Asie; Virose; Infection
Localisation : INIST, Shelf number 13592, INIST No. 354000126300760460

Origine de la notice : INIST

050151591
PASCAL

Oseltamivir (Tamiflu<Registered>) and its potential for use in the event of an influenza pandemic

Titre : Oseltamivir (Tamiflu<Registered>) and its potential for use in the event of an influenza pandemic

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Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 95 ref.

Résumé : Recent cross species transmission of avian influenza has highlighted the threat of pandemic influenza. Oseltamivir (Tamiflu<Registered>) has been shown to be effective in the treatment and prevention of epidemic influenza infection in adults, adolescents and children (>=1 year). Although oseltamivir has not been approved for prophylactic use in children, it has been shown to be effective. Oseltamivir is also active against avian influenza virus strains. Evidence suggests that lower doses or shorter durations of treatment/chemoprophylaxis other than those approved may not be effective and may contribute to emergence of viral resistance. Safety data from dose ranging studies show that 5 day courses of 150 mg twice daily for treatment and 6 week courses of 75 mg twice daily for prophylaxis were as well tolerated as the approved dose regimens. The use of oseltamivir in a pandemic is influenced by the goals of the pandemic plan developed by the responsible Government and Health Authority. To optimize use of antiviral medications, processes will be needed to collect, collate and report outcome data from treated patients and/or from use for chemoprophylaxis of pandemic influenza during the first-wave outbreaks. If oseltamivir is included in a national or regional pandemic plan, stockpiling of the material, either in the form of capsules or the bulk active pharmaceutical ingredient will be necessary. In the absence of a stockpile, there is no guarantee that an adequate supply of oseltamivir will be available.

Code(s) de classement : 002B02S

Descripteur(s) anglais
Descripteur(s) : Oseltamivir; Influenza; Treatment; Neuraminidase inhibitor; Antiviral
Desc. génériques : Infectious diseases; Pharmacology; Medical sciences; Viral disease; Infection; Exo <alpha> sialidase; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Enzyme inhibitor
Descripteur(s) français
Descripteur(s) : Oseltamivir; Grippe; Traitement; Inhibiteur neuraminidase; Antiviral
Desc. génériques : Maladies infectieuses; Pharmacologie; Sciences medicales; Virose; Infection; Exo <alpha> sialidase; O Glycosidases; Glycosidases; Hydrolases; Enzyme; Inhibiteur enzyme
Localisation : INIST, Shelf number 17084, INIST No. 354000126337080010

Origine de la notice : INIST

050144601
PASCAL

Intersegmental recombination between the haemagglutinin and matrix genes was responsible for the emergence of a highly pathogenic H7N3 avian influenza virus in British Columbia

Titre : Intersegmental recombination between the haemagglutinin and matrix genes was responsible for the emergence of a highly pathogenic H7N3 avian influenza virus in British Columbia

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Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 27 ref.

Résumé : In February 2004 a highly pathogenic avian influenza (HPAI) outbreak erupted in British Columbia. Investigations indicated that the responsible HPAI H7N3 virus emerged suddenly from a low pathogenic precursor. Analysis of the haemagglutinin (HA) genes of the low and high pathogenic viruses isolated from the index farm revealed the only difference to be a 21 nt insert at the HA cleavage site of the highly pathogenic avian influenza virus. It was deduced that this insert most probably arose as a result of non-homologous recombination between the HA and matrix genes of the same virus. Over the course of the outbreak, a total of 37 isolates with, and 3 isolates without inserts were characterized. The events described here appear very similar to those which occurred in Chile in 2002 where the virulence shift of another H7N3 virus was attributed to non-homologous recombination between the HA and nucleoprotein genes.

Code(s) de classement : 002A05C10; 002A05C04

Descripteur(s) anglais
Descripteur(s) : Influenza A virus; Recombination; Hemagglutinin; Gene; Pathogenicity; British Columbia; Microbiology; Virology; Emerging disease; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Canada; North America; America
Descripteur(s) français
Descripteur(s) : Virus grippal A; Recombinaison; Hemagglutinine; Gene; Pouvoir pathogene; Colombie britannique; Microbiologie; Virologie; Maladie emergente; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Canada; Amerique du Nord; Amerique
Localisation : INIST, Shelf number 13533, INIST No. 354000126232460230

Origine de la notice : INIST

050143409
PASCAL

Diagnostic approach for differentiating infected from vaccinated poultry on the basis of antibodies to NS1, the nonstructural protein of influenza a virus

Titre : Diagnostic approach for differentiating infected from vaccinated poultry on the basis of antibodies to NS1, the nonstructural protein of influenza a virus

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Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 44 ref.

Résumé : Vaccination programs for the control of avian influenza (AI) in poultry have limitations due to the problem of differentiating between vaccinated and virus-infected birds. We have used NS1, the conserved nonstructural protein of influenza A virus, as a differential diagnostic marker for influenza virus infection. Experimentally infected poultry were evaluated for the ability to induce antibodies reactive to NS1 recombinant protein produced in Escherichia coli or to chemically synthesized NS1 peptides. Immune sera were obtained from chickens and turkeys inoculated with live AI virus, inactivated purified vaccines, or inactivated commercial vaccines. Seroconversion to positivity for antibodies to the NS1 protein was achieved in birds experimentally infected with multiple subtypes of influenza A virus, as determined by enzyme-linked immunosorbent assay (ELISA) and Western blot analysis. In contrast, animals inoculated with inactivated gradient-purified vaccines had no seroconversion to positivity for antibodies to the NS1 protein, and animals vaccinated with commercial vaccines had low, but detectable, levels of NS1 antibodies. The use of a second ELISA with diluted sera identified a diagnostic test that results in seropositivity for antibodies to the NS1 protein only in infected birds. For the field application phase of this study, serum samples were collected from vaccinated and infected poultry, diluted, and screened for anti-NS1 antibodies. Field sera from poultry that received commercial AI vaccines were found to possess antibodies against AI virus, as measured by the standard agar gel precipitin (AGP) test, but they were negative by the NS1 ELISA. Conversely, diluted field sera from AI-infected poultry were positive for both AGP and NS1 antibodies. These results demonstrate the potential benefit of a simple, specific ELISA for anti-NS1 antibodies that may have diagnostic value for the poultry industries.

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

Descripteur(s) anglais
Descripteur(s) : Influenza A virus; Vaccine; Poultry; Antibody; Protein; Microbiology; Infection
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Infectious diseases; Medical sciences; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Veterinary
Descripteur(s) français
Descripteur(s) : Virus grippal A; Vaccin; Volaille; Anticorps; Proteine; Microbiologie; Infection
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Veterinaire
Localisation : INIST, Shelf number 17088, INIST No. 354000126255300230

050138296
PASCAL

A child with avian influenza a (H5N1) infection

Titre : A child with avian influenza a (H5N1) infection

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Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 19 ref.

Résumé : Human infections with avian influenza viruses can be severe and may be harbingers of the evolution of a pandemic strain. We present a patient in Thailand who was infected with influenza A (H5N1) virus. Prominent features included the progression from fever and dyspnea to the acute respiratory distress syndrome in a short period, lymphopenia and thrombocytopenia. Establishing the diagnosis for this patient increased public awareness of the virus and was soon followed by a halting of poultry-to-human transmission. On the basis of available data, any child with suspected avian influenza infection should be treated with oseltamivir.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza A; Pediatrics; Child; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Human
Descripteur(s) français
Descripteur(s) : Grippe A; Pediatrie; Enfant; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Homme
Localisation : INIST, Shelf number 20356, INIST No. 354000127076920120

Origine de la notice : INIST

050132733
PASCAL

Lethality to ferrets of H5N1 influenza viruses isolated from humans and poultry in 2004

Titre : Lethality to ferrets of H5N1 influenza viruses isolated from humans and poultry in 2004

Auteur(s) : GOVORKOVA Elena A; REHG Jerold E; KRAUSS Scott; YEN Hui Ling; YI GUAN; PEIRIS Malik; NGUYEN Tien D; HANH Thi H; PUTHAVATHANA Pilaipanl; LONG Hoang T; BURANATHAI Chantanee; LIM Wilina; WEBSTER Robert G; HOFFMANN Erich
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Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 39 ref.

Résumé : The 2004 outbreaks of H5N1 influenza viruses in Vietnam and Thailand were highly lethal to humans and to poultry; therefore, newly emerging avian influenza A viruses pose a continued threat, not only to avian species but also to humans. We studied the pathogenicity of four human and nine avian H5N1/04 influenza viruses in ferrets (an excellent model for influenza studies). All four human isolates were fatal to intranasally inoculated ferrets. The human isolate A/Vietnam/1203/04 (H5N1) was the most pathogenic isolate; the severity of disease was associated with a broad tissue tropism and high virus titers in multiple organs, including the brain. High fever, weight loss, anorexia, extreme lethargy, and diarrhea were observed. Two avian H5N1/04 isolates were as pathogenic as the human viruses, causing lethal systemic infections in ferrets. Seven of nine H5N1/04 viruses isolated from avian species caused mild infections, with virus replication restricted to the upper respiratory tract. All chicken isolates were nonlethal to ferrets. A sequence analysis revealed polybasic amino acids in the hemagglutinin connecting peptides of all H5N1/04 viruses, indicating that multiple molecular differences in other genes are important for a high level of virulence. Interestingly, the human A/Vietnam/ 1203/04 isolate had a lysine substitution at position 627 of PB2 and had one to eight amino acid changes in all gene products except that of the M1 gene, unlike the A/chicken/Vietnam/C58/04 and A/quail/Vietnam/36/04 viruses. Our results indicate that viruses that are lethal to mammals are circulating among birds in Asia and suggest that pathogenicity in ferrets, and perhaps humans, reflects a complex combination of different residues rather than a single amino acid difference.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Human; Poultry; Microbiology; Virology; Influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Viral disease; Infection; Veterinary
Descripteur(s) français
Descripteur(s) : Homme; Volaille; Microbiologie; Virologie; Grippe
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Virose; Infection; Veterinaire
Localisation : INIST, Shelf number 13592, INIST No. 354000127060330220

050114824
PASCAL

Fatal avian influenza A (H5N1) in a child presenting with diarrhea followed by coma

Titre : Fatal avian influenza A (H5N1) in a child presenting with diarrhea followed by coma

Auteur(s) : DE JONG Menno D; VAN CAM Bach; PHAN TU QUI; VO MINH HIEN; TRAN TAN THANH; NGUYEN BACH HUE; BELD Marcel; LE THI PHUONG; TRUONG HUU KHANH; NGUYEN VAN VINH CHAU; TRAN TINH HIEN; DO QUANG HA; FARRAR Jeremy
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ISSN : 0028-4793
CODEN : NEJMAG
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 23 ref.

Résumé : In southern Vietnam, a four-year-old boy presented with severe diarrhea, followed by seizures, coma, and death. The cerebrospinal fluid contained 1 white cell per cubic millimeter, normal glucose levels, and increased levels of protein (0.81 g per liter). The diagnosis ofavian influenza A (H5N1) was established by isolation ofthe virus from cerebrospinal fluid, fecal, throat, and serum specimens. The patient's nine-year-old sister had died from a similar syndrome two weeks earlier. In both siblings, the clinical diagnosis was acute encephalitis. Neither patient had respiratory symptoms at presentation. These cases suggest that the spectrum of influenza H5N1 is wider than previously thought.

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

Descripteur(s) anglais
Descripteur(s) : Diarrhea; Influenza A; Child; Coma; Medicine; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Human; Digestive diseases; Intestinal disease; Nervous system diseases; Consciousness impairment; Neurological disorder
Descripteur(s) français
Descripteur(s) : Diarrhee; Grippe A; Enfant; Coma; Medecine; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Homme; Appareil digestif pathologie; Intestin pathologie; Systeme nerveux pathologie; Trouble conscience; Trouble neurologique
Localisation : INIST, Shelf number 6013, INIST No. 354000126960100070

Origine de la notice : INIST

050100744
PASCAL

Molecular characterization of the complete genome of human influenza H5N1 virus isolates from Thailand

Titre : Molecular characterization of the complete genome of human influenza H5N1 virus isolates from Thailand

Auteur(s) : PUTHAVATHANA Pilaipan; AUEWARAKUL Prasert; PAKAPAK CHOR CHAROENYING; SANGSIRIWUT Kantima; POORUK Phisanu; BOONNAK Kobporn; KHANYOK Raweewan; THAWACHSUPA Pranee; KIJPHATI Rungrueng; SAWANPANYALERT Pathom
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ISSN : 0022-1317
CODEN : JGVIAY
Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 1 p.1/4

Résumé : The complete genomes of three human H5N1 influenza isolates were characterized, together with the haemagglutinin (HA) and neuraminidase (NA) genes from two additional human isolates and one chicken isolate. These six influenza isolates were obtained from four different provinces of Thailand during the avian influenza outbreak in Asia from late 2003 to May 2004. All six Thailand isolates contained multiple basic amino acids at the cleavage site in the HA gene. Amino acid residues at the receptor-binding site of the five human viruses were similar to those of the chicken virus and other H5N1 viruses from Hong Kong. The presence of amantadine resistance in the Thailand viruses isolated during this outbreak was suggested by a fixed mutation in M2 and confirmed by a phenotypic assay. All genomic segments of the Thailand viruses clustered with the recently described genotype Z. The Thailand viruses contained more avian-specific residues than the 1997 Hong Kong H5N1 viruses, suggesting that the virus may have adapted to allow a more efficient spread in avian species.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Human; Influenzavirus; Characterization; Genome; Influenza; Isolate; Thailand; Microbiology; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus; Viral disease; Infection; Asia
Descripteur(s) français
Descripteur(s) : Homme; Influenzavirus; Caracterisation; Genome; Grippe; Isolat; Thailande; Microbiologie; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus; Virose; Infection; Asie
Localisation : INIST, Shelf number 13533, INIST No. 354000126179740200

Origine de la notice : INIST

050087405
PASCAL

Probable person-to-person transmission of avian influenza A (H5N1)

Titre : Probable person-to-person transmission of avian influenza A (H5N1)

Auteur(s) : UNGCHUSAK Kumnuan; AUEWARAKUL Prasert; DOWELL Scott F; KITPHATI Rungrueng; AUWANIT Wattana; PUTHAVATHANA Pilaipan; UIPRASERTKUL Mongkol; BOONNAK Kobporn; PITTAYAWONGANON Chakrarat; COX Nancy J; ZAKI Sherif R; THAWATSUPHA Pranee; CHITTAGANPITCH Malinee; KHONTONG Rotjana; SIMMERMAN James M; CHUNSUTTHIWAT Supamit
Affiliation(s) : Bureau of Epidemiology, Thai Ministry of Public Health, Nonthaburi, Thailand; Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand; International Emerging Infections Program, Thai Ministry of Public Health and U.S. Centers for Disease Control and Prevention, Nonthaburi, Thailand; Department of Medical Sciences, Thai Ministry of Public Health, Nonthaburi, Thailand; Centers for Disease Control and Prevention, Atlanta, United States; Kamphang Phet Hospital, Thai Ministry of Public Health, Nonthaburi, Thailand; Department of Disease Control, Thai Ministry of Public Health, Nonthaburi, Thailand

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CODEN : NEJMAG
Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 25 ref.

Résumé : BACKGROUND During 2004, a highly pathogenic avian influenza A (H5N1) virus caused poultry disease in eight Asian countries and infected at least 44 persons, killing 32; most of these persons had had close contactwith poultry. No evidence of efficient person-to-person transmission has yet been reported. We investigated possible person-to-person transmission in a family cluster of the disease in Thailand. METHODS For each ofthe three involved patients, we reviewed the circumstances and timing of exposures to poultry and to other ill persons. Field teams isolated and treated the surviving patient, instituted active surveillance for disease and prophylaxis among exposed contacts, and culled the remaining poultry surrounding the affected village. Specimens from family members were tested by viral culture, microneutralization serologic analysis, immunohistochemical assay, reverse-transcriptase-polymerase-chain-reaction (RT-PCR) analysis, and genetic sequencing. RESULTS The index patient became ill three to four days after her last exposure to dying household chickens. Her mother came from a distant city to care for her in the hospital, had no recognized exposure to poultry, and died from pneumonia after providing 16 to 18 hours of unprotected nursing care. The aunt also provided unprotected nursing care; she had fever five days after the mother first had fever, followed by pneumonia seven days later. Autopsy tissue from the mother and nasopharyngeal and throat swabs from the aunt were positive for influenza A (H5N1) by RT-PCR. No additional chains of transmission were identified, and sequencing of the viral genes identified no change in the receptor-binding site of hemagglutinin or other key features of the virus. The sequences of all eight viral gene segments clustered closely with other H5N1 sequences from recent avian isolates in Thailand. CONCLUSIONS Disease in the mother and aunt probably resulted from person-to-person transmission ofthis lethal avian influenzavirus during unprotected exposure to the critically ill index patient.

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

Descripteur(s) anglais
Descripteur(s) : Transmission; Influenza A; Medicine; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Transmission; Grippe A; Medecine; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 6013, INIST No. 354000126569980010

Outbreaks of avian influenza A (H5N1) in Asia and interim recommendations for evaluation and reporting of suspected cases: United States, 2004. Commentary

Titre : Outbreaks of avian influenza A (H5N1) in Asia and interim recommendations for evaluation and reporting of suspected cases: United States, 2004. Commentary

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Date de publication : 2005
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : article; comments
Nombre de références : 22 ref.

Code(s) de classement : 002B27B; 002B24A02; 002B27D01

Descripteur(s) anglais
Descripteur(s) : Resuscitation; Intensive care; Epidemic; Influenza A; Asia; Recommendation; United States
Desc. génériques : Resuscitation; Intensive care medicine; Medical sciences; Pneumology; Respiratory system; Medical sciences; Transfusion; Medical sciences; Viral disease; Infection; North America; America
Descripteur(s) français
Descripteur(s) : Reanimation; Soin intensif; Epidemie; Grippe A; Asie; Recommandation; Etats Unis
Desc. génériques : Reanimation; Soins intensifs; Sciences medicales; Pneumologie; Appareil respiratoire; Sciences medicales; Transfusion; Sciences medicales; Virose; Infection; Amerique du Nord; Amerique
Localisation : INIST, Shelf number 19670, INIST No. 354000126128920150

Origine de la notice : INIST

050075576
PASCAL

A hypothesis: the conjunction of soldiers, gas, pigs, ducks, geese and horses in Northern France during the Great War provided the conditions for the emergence of the "Spanish" influenza pandemic of 1918-1919

Titre : A hypothesis: the conjunction of soldiers, gas, pigs, ducks, geese and horses in Northern France during the Great War provided the conditions for the emergence of the "Spanish" influenza pandemic of 1918-1919

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Date de publication : 2005
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 21 ref.

Résumé : The Great Influenza Pandemic of 1918-1919 was a cataclysmic outbreak of infection wherein over 50 million people died worldwide within 18 months. The question of the origin is important because most influenza surveillance at present is focussed on S.E. Asia. Two later pandemic viruses in 1957 and 1968 arose in this region. However we present evidence that early outbreaks of a new disease with rapid onset and spreadability, high mortality in young soldiers in the British base camp at Etaples in Northern France in the winter of 1917 is, at least to date, the most likely focus of origin of the pandemic. Pathologists working at Etaples and Aldershot barracks later agreed that these early outbreaks in army camps were the same disease as the infection wave of influenza in 1918. The Etaples camp had the necessary mixture of factors for emergence of pandemic influenza including overcrowding (with 100,000 soldiers daily changing), live pigs, and nearby live geese, duck and chicken markets, horses and an additional factor 24 gases (some of them mutagenic) used in large 100 ton quantities to contaminate soldiers and the landscape. The final trigger for the ensuing pandemic was the return of millions of soldiers to their homelands around the entire world in the autumn of 1918.

Code(s) de classement : 002A05F04

Descripteur(s) anglais
Descripteur(s) : Swine; Horse; France; Emerging disease; Influenza
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Artiodactyla; Ungulata; Mammalia; Vertebrata; Perissodactyla; Europe; Veterinary; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Porcin; Cheval; France; Maladie emergente; Grippe
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Artiodactyla; Ungulata; Mammalia; Vertebrata; Perissodactyla; Europe; Veterinaire; Virose; Infection
Localisation : INIST, Shelf number 20289, INIST No. 354000126058210140

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