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Septembre 2006

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LISTE DES TITRES

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V E I L L E

060319040
PASCAL

Influenza pandemic preparedness in France : modelling the impact of interventions

Titre : Influenza pandemic preparedness in France : modelling the impact of interventions

Auteur(s) : DOYLE Aoife; BONMARIN Isabelle; LEVY BRUHL Daniel; LE STRAT Yann; DESENCLOS Jean Claude
Affiliation(s) : EPIET, France; Institut de Veille Sanitaire, France

Source : Journal of epidemiology and community health 1979. 2006; 60 (5) : 399-404
ISSN : 0143-005X
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 27 ref.

Résumé : Background: Influenza pandemics result in excess mortality and social disruption. To assist health authorities update the French pandemic plan, the authors estimated the number of health events (cases, hospitalisations, and deaths) in a pandemic and compared interventions in terms of impact and efficiency. Method: A Monte Carlo simulation model, incorporating probability distributions of key variables, provided estimates of health events (HE) by age and risk group. Input variables were set after literature and expert consultation. The impact of targeted influenza vaccination and antiviral prophylaxis/treatment (oseltamivir) in high risk groups (elderly, chronic diseases), priority (essential professionals), and total populations was compared. Outcome measures were HE avoided, number of doses needed, and direct cost per HE avoided. Results: Without intervention, an influenza pandemic could result in 14.9 million cases, 0.12 million deaths, and 0.6 million hospitalisations in France. Twenty four per cent of deaths and 40% of hospitalisations would be among high risk groups. With a 25% attack rate, 2000-86 000 deaths could be avoided, depending on population targeted and intervention. If available initially, vaccination of the total population is preferred. If not, for priority populations, seasonal prophylaxis seems the best strategy. For high risk groups, antiviral treatment, although less effective, seems more feasible and cost effective than prophylaxis (respectively 29% deaths avoided; 1800 doses/death avoided and 56% deaths avoided; 18 500 doses/death avoided) and should be chosen, especially if limited drug availability. Conclusion: The results suggest a strong role for antivirals in an influenza pandemic. While this model can compare the impact of different intervention strategies, there remains uncertainty surrounding key variables.

Code(s) de classement : 002B30A11; 002B01; 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Influenza; Public health; Preparation; Models; Teaching; France; Modeling; Treatment; Medicine; Simulation; Storage; Antiviral; Monte Carlo method
Desc. génériques : Public health; Medical sciences; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Europe
Descripteur(s) français
Descripteur(s) : Grippe; Sante publique; Preparation; Modele; Enseignement; France; Modelisation; Traitement; Medecine; Simulation; Stockage; Antiviral; Methode Monte Carlo; Pandemie; Etat de preparation; Plan pandemie
Desc. génériques : Sante publique; Sciences medicales; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Europe
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060318477
PASCAL

From genome to drug lead : Identification of a small-molecule inhibitor of the SARS virus

Titre : From genome to drug lead : Identification of a small-molecule inhibitor of the SARS virus

Auteur(s) : DOOLEY Andrea J; SHINDO Nice; TAGGART Barbara; PARK Jewn Giew; PANG Yuan Ping
Affiliation(s) : Computer-Aided Molecular Design Laboratory, Mayo Clinic College of Medicine, 200 First Street SW, Rochester, MN 55905, United States; Emerging Pathogens Department, Southern Research Institute, 2000 9th Avenue South, Birmingham, AL 35205, United States

Source : Bioorganic and medicinal chemistry letters Print. 2006; 16 (4) : 830-833
ISSN : 0960-894X
Date de publication : 2006
Pays de publication : United Kingdom
Langue(s) : English
Type de document : Serial
Nombre de références : 30 ref.

Résumé : Virtual screening, a fast, computational approach to identify drug leads [Perola, E.; Xu, K.; Kollmeyer, T. M.; Kaufmann, S. H.; Prendergast, F. G. J. Med. Chem. 2000, 43, 401; Miller, M. A. Nat. Rev. Drug Disc. 2002, 1 220], is limited by a known challenge in crystallographically determining flexible regions of proteins. This approach has not been able to identify active inhibitors of the severe acute respiratory syndrome-associated coronavirus (SARS-CoV) using solely the crystal structures of a SARS-CoV cysteine proteinase with a flexible loop in the active site [Yang, H. T.; Yang, M. J.; Ding, Y.; Liu, Y. W.; Lou, Z. Y. Proc. Natl. Acad. Sci. U.S.A. 2003, 100, 13190; Jenwitheesuk, E.; Samudrala, R. Bioorg. Med. Chem. Lett. 2003, 13, 3989; Rajnarayanan, R. V.; Dakshanamurthy, S.; Pattabiraman, N. Biochem. Biophys. Res. Commun. 2004, 321, 370; Du, Q.; Wang, S.; Wei, D.; Sirois, S.; Chou, K. Anal. Biochem, 2005, 337, 262; Du, Q.; Wang, S.; Zhu, Y.; Wei, D.; Guo, H. Peptides 2004, 25, 1857; Lee, V.; Wittayanarakul, K.; Remsungenen, T.; Parasuk, V.; Sompornpisut, P. Science (Asia) 2003, 29, 181; Toney, J.; Navas-Martin, S.; Weiss, S.; Koeller, A. J. Medl. Chem. 2004, 47, 1079; Zhang, X. W.; Yap, Y. L. Bioorg. Med. Chem. 2004, 12, 2517]. This article demonstrates a genome-to-drug-lead approach that uses terascale computing to model flexible regions of proteins, thus permitting the utilization of genetic information to identify drug leads expeditiously. A small-molecule inhibitor of SARS-CoV, exhibiting an effective concentration (EC<sub>5<sub>0) of 23 <mu>M in cell-based assays, was identified through virtual screening against a computer-predicted model of the cysteine proteinase. Screening against two crystal structures of the same proteinase failed to identify the 23-<mu>M inhibitor. This study suggests that terascale computing can complement crystallography, broaden the scope of virtual screening, and accelerate the development of therapeutics to treat emerging infectious diseases such as SARS and Bird Flu.

Code(s) de classement : 002B02S05

Descripteur(s) anglais
Descripteur(s) : Structure activity relation; Small molecule; Antiviral; Severe acute respiratory syndrome virus; Protein; Genome; Crystalline structure; Cysteine endopeptidases; Active site; Fluorene derivatives; Phenols; Molecular model; Prediction; Crystallography; Imine; Modeling; Carboxamide; Chemical compound library; Virtual screening
Desc. génériques : Virology; Infectious diseases; Pharmacology; Medical sciences; Coronavirus; Coronaviridae; Nidovirales; Virus; Peptidases; Hydrolases; Enzyme
Descripteur(s) français
Descripteur(s) : Relation structure activite; Molecule petite; Antiviral; Virus syndrome respiratoire aigu severe; Proteine; Genome; Structure cristalline; Cysteine endopeptidases; Site actif; Fluorene derive; Phenols; Modele moleculaire; Prediction; Cristallographie; Imine; Modelisation; Carboxamide; Chimiotheque; Dibenzofurane derive; Criblage virtuel
Desc. génériques : Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; Coronavirus; Coronaviridae; Nidovirales; Virus; Peptidases; Hydrolases; Enzyme

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060314351
PASCAL

L' influenza aviaire hautement pathogene ou peste aviaire et le risque pour l' Homme; Highly pathogenic avian influenza in poultry (fowl plague); implications for human health

Titre : L' influenza aviaire hautement pathogene ou peste aviaire et le risque pour l' Homme; Highly pathogenic avian influenza in poultry (fowl plague); implications for human health

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Source : Bulletin de l'Academie nationale de medecine. 2005; 189 (8) : 1817-1826
ISSN : 0001-4079
CODEN : BANMAC
Date de publication : 2005
Pays de publication : France
Langue(s) : French
Langue(s) du résumé : English
Type de document : Serial
Nombre de références : 22 ref.

Résumé : Depuis 1997 les infections dues au virus influenza aviaires hautement pathogenes (IAHP) ou pestes aviaires touchant les volailles ont presente plus d' importance en medecine humaine du fait de l' emergence d' un risque de zoonose associe a des cas mortels. Ces infections humaines ont ete sporadiques avec les virus IAHP H7N7 et H5N1 en Europe et en Asie respectivement. La persistance de l' infection due au virus H5N1 dans plusieurs pays asiatiques et leur apparition en Europe ont represente une cause d' inquietude sur le risque de mutation ou de reassortiment de ces virus influenza avec adaptation a l' espece humaine, conduisant a une pandemie de grippe humaine. Les oiseaux aquatiques, principaux reservoirs de tous les virus influenza A, ne sont generalement pas sensibles a ces virus. Cependant, depuis 2002, on a pu noter un plus grand nombre d' especes sensibles au virus IAHP H5N1 asiatique (canards, felides, Homme). Actuellement, la transmission du virus IAHP H5N1 a des canards domestiques et sauvages de nouveau resistants a ce virus et a des oiseaux terrestres (pigeon, moineau, faucon pelerin) augmente le risque de propagation geographique du virus. Les infections virales dues aux virus influenza A faiblement pathogenes sont localisees aux tractus respiratoire et digestif et le virus n' est pas retrouve dans le sang, la viande ou les oeufs, comme dans les infections dues aux virus IAHP ou l' on observe une viremie. La presence du virus IAHP dans la viande, le sang et les organes internes des poulets et des canards infectes justifie, par mesure de precaution pour la sante publique, de bien cuire la viande et les oeufs en Asie pour tuer le virus. Depuis 1955, la France n' a pas declare de foyer de peste aviaire.

Code(s) de classement : 002B01; 002B05C02C; 002B05B02L7

Descripteur(s) anglais
Descripteur(s) : Pathogenic; Human; Pathogenesis; Poultry; Public health; Disease; Medicine; Infectious risk; Avian influenza
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Bacteriology; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Pathogene; Homme; Pathogenie; Volaille; Sante publique; Maladie; Medecine; Risque infectieux; Souche H5N1; Pandemie; Grippe aviaire
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Bacteriologie; Maladies infectieuses; Sciences medicales
Localisation : INIST, Shelf number 740, INIST No. 354000153054940160

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060313082
PASCAL

Distribution of amantadine-resistant H5N1 avian influenza variants in Asia

Titre : Distribution of amantadine-resistant H5N1 avian influenza variants in Asia

Auteur(s) : CHEUNG Chung Lam; RAYNER Jane M; SMITH Gavin J D; PUI WANG; NAIPOSPOS T S P; JINXIA ZHANG; YUEN Kwok Yung; WEBSTER Robert G; MALIK PEIRIS J S; YI GUAN; HONGLIN CHEN
Affiliation(s) : State Key Laboratory of Emerging Infectious Diseases, Department of Microbiology, University of Hong Kong, Pokfulam, Hong Kong; Joint Influenza Research Center (Shantou University Medical College and University of Hong Kong), Shantou University Medical College, Shantou, Guangdong, China; Center for Indonesian Veterinary Analytical Studies, Jakarta, Indonesia, United States; Virology Division, Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, Tennessee, United States

Source : The Journal of infectious diseases. 2006; 193 (12) : 1626-1629
ISSN : 0022-1899
CODEN : JIDIAQ
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Type de document : short-communication
Nombre de références : 16 ref.

Résumé : We examined the distribution of genetic mutations associated with resistance to the M2 ion channel-blocking adamantane derivatives, amantadine and rimantadine, among H5N1 viruses isolated in Vietnam, Thailand, Cambodia, Indonesia, Hong Kong, and China. More than 95% of the viruses isolated in Vietnam and Thailand contained resistance mutations, but resistant mutants were less commonly isolated in Indonesia (6.3% of isolates) and China (8.9% of isolates), where human infection was recently reported. The dual mutation motif Leu26Ile-Ser31Asn (leucine<chemical reaction>isoleucine at aa 26 and serine<chemical reaction>asparagine at aa 31) was found almost exclusively in all resistant isolates from Vietnam, Thailand, and Cambodia, suggesting the biological selection of these mutations.

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

Descripteur(s) anglais
Descripteur(s) : Resistance; Asia; Microbiology; Infection; Amantadine; Antiparkinson agent; Antiviral; Avian influenza
Desc. génériques : Microbiology; Biological sciences; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Resistance; Asie; Microbiologie; Infection; Amantadine; Antiparkinsonien; Antiviral; Grippe aviaire
Desc. génériques : Microbiologie; Sciences biologiques; Maladies infectieuses; Sciences medicales
Localisation : INIST, Shelf number 2052, INIST No. 354000156691540020

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V E I L L E

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060312480
PASCAL

No effect of the 1918 influenza pandemic on the incidence of acute compulsory psychiatric admissions in Amsterdam

Titre : No effect of the 1918 influenza pandemic on the incidence of acute compulsory psychiatric admissions in Amsterdam

Auteur(s) : VAN DER HEIDE Douwe H; COUTINHO Roel A
Affiliation(s) : Phoenix, Centre for Psychiatric Treatment of Refugees, Psychiatric Hospital "De Gelderse Roos", Netherlands; Center for infectious Disease Control, National Institute for Public Health and the Environment, Bilthoven, Netherlands; Academic Medical Center/University of Amsterdam, Department of Human Retrovirology, Amsterdam, Netherlands

Source : European journal of epidemiology. 2006; 21 (3) : 249-250
ISSN : 0393-2990
Date de publication : 2006
Pays de publication : Netherlands
Langue(s) : English
Type de document : Serial
Nombre de références : 2 ref.

Code(s) de classement : 002B30A11; 002B05C02C; 002B18A

Descripteur(s) anglais
Descripteur(s) : Influenza; Public health; World; Incidence; Epidemiology; Acute; Netherlands; Mental health; Century 20th; Mental disorder; History; Population; Behavior; Spanish flu
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; Psychiatry; Psychopathology; Medical sciences; Viral disease; Infection; Europe
Descripteur(s) français
Descripteur(s) : Grippe; Sante publique; Monde; Incidence; Epidemiologie; Aigu; Pays Bas; Sante mentale; Siecle 20eme; Trouble psychiatrique; Histoire; Population; Comportement; Pandemie; Grippe espagnole
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Psychiatrie; Psychopathologie; Sciences medicales; Virose; Infection; Europe
Localisation : INIST, Shelf number 20856, INIST No. 354000152977170120

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V E I L L E

060310755
PASCAL

Dual expression of the HA protein of H5N2 avian influenza virus in a baculovirus system

Titre : Dual expression of the HA protein of H5N2 avian influenza virus in a baculovirus system

Auteur(s) : HU Yu C; LUO Yu L; JI Wen T; CHULU Julius L C; CHANG Poa C; SHIEH Happy; WANG Chi Y; LIU Hung J
Affiliation(s) : Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan; Department of Veterinary Medicine, National Pingtung University of Science and Technology, Pingtung, Taiwan; Graduate Institute of Biotechnology, National Pingtung University of Science and Technology, Pingtung, Taiwan; Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan; Graduate Institute of Veterinary Microbiology, National Chung Hsing University, Taichung, Taiwan; Department of Life Science, National Pingtung University of Science and Technology, Pingtung, Taiwan

Source : Journal of virological methods. 2006; 135 (1) : 43-48
ISSN : 0166-0934
CODEN : JVMEDH
Date de publication : 2006
Pays de publication : Netherlands
Langue(s) : English
Type de document : Serial
Type de document : research-paper
Nombre de références : 23 ref.

Résumé : Baculovirus/insect cell system is used widely for recombinant protein production. The hemagglutinin (HA) gene of H5N2 avian influenza virus (AIV) 1209 strain and the enhanced green fluorescent protein (EGFP) gene were cloned into pFastBac DUAL vector that has two promoters and cloning sites, allowing simultaneous expression of these two genes. The HA protein of AIV was fused with a hexahistidine (His<sub>6) tag for purification. The coexpression of EGFP allowed identification of the recombinant baculoviruses in Sf-9 insect cells, eliminating cumbersome and time-consuming assays. A recombinant baculovirus, Bac-HA, was generated by transfecting pBac-HA to bacmid inside DH10B<sub>A<sub>C Escherichia coli by site-specific transposition, followed by transfection into the Sf-9 cells. Fluorescence in the insect cells was observed from 3 days post-infection. The expressed HA protein was confirmed by Western blot using an anti-HA monoclonal antibody. Also, different detergents and incubation times on ice were tested. The two-stage extraction with Triton X-100 or Tween 20 and incubation on ice for 2 h exhibited high efficiency. Since purification of HA with ConA resin resulted in low protein recovery, lentil lectin affinity column was used and was useful for HA purification.

Code(s) de classement : 002A05C09

Descripteur(s) anglais
Descripteur(s) : Avian influenzavirus; Influenza A virus; Baculoviridae; Protein; Microbiology; Method; Virology
Desc. génériques : Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
Descripteur(s) français
Descripteur(s) : Influenzavirus aviaire; Virus grippal A; Baculoviridae; Proteine; Microbiologie; Methode; Virologie
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus
Localisation : INIST, Shelf number 18295, INIST No. 354000142540320060

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060310725
PASCAL

Properties and dissemination of H5N1 viruses isolated during an influenza outbreak in migratory waterfowl in western China

Titre : Properties and dissemination of H5N1 viruses isolated during an influenza outbreak in migratory waterfowl in western China

Auteur(s) : HUALAN CHEN; YANBING LI; ZEJUN LI; JIANZHONG SHI; SHINYA Kyoko; GUOHUA DENG; QIAOLING QI; GUOBIN TIAN; SHUFANG FAN; HAIDAN ZHAO; YINGXIANG SUN; KAWAOKA Yoshihiro
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Source : Journal of virology. 2006; 80 (12) : 5976-5983
ISSN : 0022-538X
Date de publication : 2006
Pays de publication : United States
Langue(s) : English
Type de document : Serial
Nombre de références : 24 ref.

Résumé : H5N1 influenza A viruses are widely distributed among poultry in Asia, but until recently, only a limited number of wild birds were affected. During late April through June 2005, an outbreak of H5N1 virus infection occurred among wild birds at Qinghai Lake in China. Here, we describe the features of this outbreak. First identified in bar-headed geese, the disease soon spread to other avian species populating the lake. Sequence analysis of 15 viruses representing six avian species and collected at different times during the outbreak revealed four different H5N1 genotypes. Most of the isolates possessed lysine at position 627 in the PB2 protein, a residue known to be associated with virulence in mice and adaptation to humans. However, neither of the two index viruses possessed this residue. All of the viruses tested were pathogenic in mice, with the exception of one index virus. We also tested the replication of two viruses isolated during the Qinghai Lake outbreak and one unrelated duck H5N1 virus in rhesus macaques. The Qinghai Lake viruses did not replicate efficiently in these animals, producing no evidence of disease other than transient fever, while the duck virus replicated in multiple organs and caused symptoms of respiratory illness. Importantly, H5N1 viruses isolated in Mongolia, Russia, Inner Mongolia, and the Liaoning Province of China after August 2005 were genetically closely related to one of the genotypes isolated during the Qinghai outbreak, suggesting the dominant nature of this genotype and underscoring the need for worldwide intensive surveillance to minimize its devastating consequences.

Code(s) de classement : 002A05C10

Descripteur(s) anglais
Descripteur(s) : Dissemination; China; Microbiology; Virology; Avian influenza
Desc. génériques : Virology; Microbiology; Biological sciences; Asia
Descripteur(s) français
Descripteur(s) : Dissemination; Chine; Microbiologie; Virologie; Grippe aviaire
Desc. génériques : Virologie; Microbiologie; Sciences biologiques; Asie
Localisation : INIST, Shelf number 13592, INIST No. 354000115548630330

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060305293
PASCAL

Fortune favours the prepared mind : A national perspective on pandemic preparedness

Titre : Fortune favours the prepared mind : A national perspective on pandemic preparedness

Auteur(s) : TAM Theresa; SCIBERRAS Jill; MULLINGTON Beatrice; KING Arlene
Affiliation(s) : Immunization and Respiratory Infections Division, Public Health Agency of Canada, Ottawa, ON, Canada

Source : Canadian journal of public health. 2005; 96 (6) : 406-408
ISSN : 0008-4263
Date de publication : 2005
Pays de publication : Canada
Langue(s) : English
Langue(s) du résumé : French
Type de document : Serial
Nombre de références : 3 ref.

Résumé : La propagation rapide du virus H5N1 de la grippe aviaire en Asie a la fin de 2003 a declenche une alerte pandemique dans le monde. Le risque de nouvelles infections humaines devrait subsister, tout comme les possibilites d' emergence d' un virus pandemique. Le Canada prend donc un certain nombre de mesures pour renforcer sa capacite d' intervention en cas de pandemie. Pour favoriser la coordination, le Canada dispose d' un plan national de preparation aux pandemies, et on est en train d' elaborer des systemes et des processus nationaux de gestion des situations d' urgence en sante. Des progres ont ete accomplis a plusieurs egards : amelioration de la capacite de surveillance et de communication rapides, elaboration d' une strategie de vaccination en cas de pandemie, acquisition d' une reserve de medicaments antiviraux, etablissement des priorites de recherche, hausse de la cooperation internationale, et tenue d' une reunion internationale des ministres de la Sante (octobre 2005) pour renforcer la cooperation et la coordination mondiales en prevision d' une eventuelle pandemie de grippe. Les prochaines grandes etapes seront : <Mathematical point> la publication de l' edition 2005 du Plan canadien de lutte contre la pandemie d' influenza; <Mathematical point> la tenue d' exercices de preparation aux urgences pour renforcer la planification a tous les paliers et entre les secteurs des soins de sante, de la gestion des urgences et des ONG; <Mathematical point> la mise au point et les essais cliniques d' un vaccin contre le H5N1; <Mathematical point> l' evaluation du besoin de completer la reserve nationale de medicaments antiviraux; <Mathematical point> la tenue de consultations avec la population et les intervenants cles pour etayer les strategies et les activites de planification.

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

Descripteur(s) anglais
Descripteur(s) : Public health; World; Preparation; Canada; Influenza; Strategy; Human; Planning
Desc. génériques : Public health; Medical sciences; Virology; Infectious diseases; Medical sciences; North America; America; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Sante publique; Monde; Preparation; Canada; Grippe; Strategie; Homme; Planification; Etat de preparation; Plan canadien de lutte contre la pandemie d' influenza; Pandemie
Desc. génériques : Sante publique; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Amerique du Nord; Amerique; Virose; Infection
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060300776
PASCAL

Influenza: the next pandemic? : A review

Titre : Influenza: the next pandemic? : A review

Auteur(s) : ADUNGO F O; ADUNGO N I; BEDNO S; YINGST S L
Affiliation(s) : Centre for Infectious and Parasitic Diseases Control Researeh-Busia, P.O. Box 3 Busia, Kenya; U.S. Army Medical Research Unit-Kenya, P.O. Box 30137, Nairobi, Kenya; Virology Research Program, U.S. Naval Medical Research Unit No: 3 c/o American Embassy Cairo, Egypt

Source : East African medical journal. 2005; 82 (9) : 477-481
ISSN : 0012-835X
CODEN : EAMJAV
Date de publication : 2005
Pays de publication : Kenya
Langue(s) : English
Type de document : Serial
Nombre de références : 17 ref.

Résumé : Objectives: To examine existing information on the recent influenza outbreaks in order to create awareness of a possible influenza pandemic and to suggest future research areas in developing control strategies in Kenya. Data sources: Review of literature via Internet, articles, journals and un-refereed features from the media and personal communications. Data selection: Most published data from 1979 to March 2005 found to reveal cases of influenza outbreaks were included in the review. Also, selected articles on the recent outbreaks and professional guidance on influenza infections were critically examined and analyzed. Data extraction: Abstracts and articles identified were accessed, read to establish relevance to this review. Data synthesis: Important points were prioritised and then included as subtitles; below each subtitle, published works were included. Finally, a table of influenza outbreaks and the strains of the viruses involved were drawn as summary. Conclusion: Influenza is a highly contagious, acute respiratory disease that may spread rapidly and pervasively through a population. Due to the diversity of susceptible reservoirs of influenza viruses and the interspecies transmission recently reported, a mutated strain of the virus to which people have no immunity could cause an influenza pandemic once the virus gains efficient and sustained human-to-human transmission. The fear that avian influenza could be a precursor to the next pandemic is real and inevitable, given the extremely high case-fatality ratio among confirmed cases and that genetic sequencing of influenza A (H5N1) viruses from human cases in Thailand and Vietnam show resistance to the antiviral medication amantadine and rimantadine. This calls for a high level of preparedness to avoid a public health emergency. Nowhere is this paradigm more real than in Africa.

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

Descripteur(s) anglais
Descripteur(s) : Influenza; Review; Tropical medicine
Desc. génériques : Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
Descripteur(s) français
Descripteur(s) : Grippe; Article synthese; Medecine tropicale
Desc. génériques : Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection
Localisation : INIST, Shelf number 17259, INIST No. 354000156666710090

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060296788
PASCAL

Construction and immunogenicity of recombinant fowlpox vaccines coexpressing HA of AIV H5N1 and chicken IL18

Titre : Construction and immunogenicity of recombinant fowlpox vaccines coexpressing HA of AIV H5N1 and chicken IL18

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Nombre de références : 34 ref.

Résumé : cDNAs of the HA genes of subtype H5N1 AIV were fused to form a single open reading frame, designated H5HA-H7HA. The H5HA-H7HA cDNA and chicken Interleukin-18 (IL18) were inserted into the fowlpox virus (FPV) expression vector pUTA-16-LacZ to produce pUTAL-H5-H7-IL18. cDNA of H5N1 AIV HA was inserted into the FPV expression vector pUTA2 to create the recombinant expression plasmid pUTA2-H5. Plasmids were then co-transected into CEF cells. The two recombinant fowlpox viruses (rFPV) were produced by three cycles with the BrdU and verified by RT-PCR, IFA and Western blotting. One-day-old specific pathogen free (SPF) chickens and 7-day-old commercial Leghorn egg-laying chickens were inoculated with 10<sup>6 PFU recombinant or parental fowlpox vaccine viruses by wing-web puncture. Hemagglutination inhibition (HI) antibody titer and nonspecific cellular immunity level were assessed after 1-3 weeks post-immunization. We found that all rFPV-vaccinated groups produced HI-specific antibodies, and the level of cellular immunity induced by the rFPV-H5-H7-IL18 strain was significantly higher than that induced by rFPV-H5HA. At 3 weeks post-inoculation, immunized SPF and Leghorn chickens were challenged with H5N1 HP AIV. The rFPV-H5-H7-IL18 vaccine strains were able to induce complete (10/10) protection, while the rFPV-H5HA vaccine strain induced (9/10) protection. Cloacal swabbing samples were collected from immunized leghorn chickens during the first week post-challenge; no shedding was found in the rFPV-H5-H7-IL18 vaccinated group. The rFPV-H5-H7-IL18 vaccinated group displayed significantly increased weight gain relative to the rFPV-H5HA group. This study reports a significant step in the further development of new AIV vaccines.

Code(s) de classement : 002A05F04

Descripteur(s) anglais
Descripteur(s) : Chicken; Immunogenicity; Vaccine; Hemagglutinin; Avian influenza
Desc. génériques : Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Aves; Vertebrata; Poultry; Veterinary; Farming animal
Descripteur(s) français
Descripteur(s) : Poulet; Immunogenicite; Vaccin; Hemagglutinine; Grippe aviaire
Desc. génériques : Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Aves; Vertebrata; Volaille; Veterinaire; Animal elevage
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060290101
PASCAL

La grippe aviaire; Avian influenza

Titre : La grippe aviaire; Avian influenza

Auteur(s) : AMIR ASLANI Arsia; BITTOUN Patrick; MEGARBANE Bruno
Affiliation(s) : Hopital Lariboisiere, Unknown

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Date de publication : 2006
Pays de publication : France
Langue(s) : French
Type de document : Serial

Résumé : Au coeur de l' actualite, la grippe aviaire suscite des inquietudes dans le monde entier. Si elle touche generalement les animaux, on evoque aujourd' hui la possibilite d' un futur passage a l' homme. Si celui-ci a deja cotoye ce type de virus par le passe, quels sont aujourd' hui les risques et comment y faire face ?

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
Descripteur(s) : Risk analysis; Prevention; Human; Avian influenza
Desc. génériques : Virology; Infectious diseases; Medical sciences
Descripteur(s) français
Descripteur(s) : Analyse risque; Prevention; Homme; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales
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060288697
PASCAL

Safety and immunogenicity of an inactivated split-virion influenza A/Vietnam/1194/2004 (H5N1) vaccine: Phase I randomised trial. Commentary

Titre : Safety and immunogenicity of an inactivated split-virion influenza A/Vietnam/1194/2004 (H5N1) vaccine: Phase I randomised trial. Commentary

Auteur(s) : SAMBHARA Suryaprakash, comment; POLAND Gregory A, comment; BRESSON Jean Louis; PERRONNE Christian; LAUNAY Odile; GEIDIL Catherine; SAVILLE Melanie; WOOD John; HOSCHLER Katja; ZAMBON Maria C
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Résumé : Background Pathogenic avian influenza A virus H5N1 has caused outbreaks in poultry and migratory birds in Asia, Africa, and Europe, and caused disease and death in people. Although person-to-person spread of current H5N1 strains is unlikely, the virus is a potential source of a future influenza pandemic. Our aim was to assess the safety and immunogenicity of a vaccine against the H5N1 strain. Methods We did a randomised, open-label, non-controlled phase I trial in 300 volunteers aged 18-40 years and assigned one of six inactivated split influenza A/Vietnam/1194/2004 (H5N1) influenza vaccine formulations, comprising 7.5 pg (with adjuvant n=50, without adjuvant n=49), 15 pg (n=50, n=50), or 30 pg (n=51, n=50) of haemagglutinin with or without aluminium hydroxide adjuvant. Individuals received two vaccinations (on days 0 and 21) and provided blood samples (on days 0, 21, and 42) for analysis by haemagglutination inhibition and microneutralisation. We recorded all adverse events. Analyses were descriptive. Findings All formulations were well tolerated, with no serious adverse events, few severe reactions, and no oral temperatures of more than 38<degree>C. All formulations induced an immune response, and responses were detectable in some individuals after only one dose. The adjuvanted 30 <mu>g formulation induced the greatest response (67% haemagglutinin-inhibition seroconversion rate after two vaccinations). Adjuvant did not improve the response to the lower doses. Two vaccinations of non-adjuvanted 7.5 pg, adjuvanted 15 pg, or non-adjuvanted 15 pg seroconverted more than 40% of participants (haemagglutinin-inhibition test only). Haemagglutinin inhibition and neutralising results were comparable. Interpretation A two-dose regimen with an adjuvanted 30 pg inactivated H5N1 vaccine was safe and showed an immune response consistent with European regulatory requirements for licensure of seasonal influenza vaccine. We noted encouraging responses with lower doses of antigen that need further study to ascertain their relevance for the choice of the final pandemic vaccine.

Code(s) de classement : 002B01

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Descripteur(s) : Immunoprophylaxis; Toxicity; Safety; Immunogenicity; Immune response; Virion; Vietnam; 2004; Prevention; Vaccine; Phase I trial; Randomization; Critical study; Medicine; Influenzavirus AH5N1
Desc. génériques : Medical sciences; Asia
Descripteur(s) français
Descripteur(s) : Immunoprophylaxie; Toxicite; Securite; Immunogenicite; Reponse immune; Virion; Vietnam; 2004; Prevention; Vaccin; Essai clinique phase I; Randomisation; Etude critique; Medecine; Influenzavirus AH5N1
Desc. génériques : Sciences medicales; Asie
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060284272
PASCAL

Le Royaume-Uni s' organise contre la grippe aviaire

Titre : Le Royaume-Uni s' organise contre la grippe aviaire

Auteur(s) : DEGREZ Gaelle
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Langue(s) : French
Type de document : Serial

Résumé : Depuis que l' epidemie de grippe aviaire a fait son apparition en Europe, le Royaume-Uni s' attendait a l' arrivee du virus sur son territoire a tout moment. C' est finalement le 29 mars dernier que le premier cas a ete detecte, sur un cygne sauvage en Ecosse. Cette nouvelle a bien entendu fait la une des journaux britanniques et suscite une tres vive emotion. Mais pour le Pr Colin Blackemore, directeur general du Medical Research Council, " la preparation est preferable a la panique ". Treizieme pays de l' Union europeenne a etre touche par le virus, le Royaume-Uni se prepare depuis plusieurs mois selon les mesures preconisees par l' Organisation mondiale de la sante. En octobre dernier, le ministere de la Sante britannique a publie un plan d' action preventif en cas d' epidemie humaine de grippe derivee de la grippe aviaire.

Code(s) de classement : 002B05C02C

Descripteur(s) anglais
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Descripteur(s) français
Descripteur(s) : Royaume Uni; Strategie; Prevention; Sante publique; Grippe aviaire
Desc. génériques : Virologie; Maladies infectieuses; Sciences medicales; Europe
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