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Juin 2008

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*080181342*
**PASCAL**

# Phylogenetic Evidence against Evolutionary Stasis and Natural Abiotic Reservoirs of Influenza A Virus

**Titre :** Phylogenetic Evidence against Evolutionary Stasis and Natural Abiotic Reservoirs of Influenza A Virus

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**Source :** Journal of virology. 2008; 82 (7) : 3769-3774
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 23 ref.

**Résumé :** Zhang et al. (G. Zhang, D. Shoham, D. Gilichinsky, S. Davydov, J. D. Castello, and S. O. Rogers, J. Virol. 80:12229-12235, 2006) have claimed to have recovered influenza A virus RNA from Siberian lake ice, postulating that ice might represent an important abiotic reservoir for the persistence and reemergence of this medically important pathogen. A rigorous phylogenetic analysis of these influenza A virus hemagglutinin gene sequences, however, indicates that they originated from a laboratory reference strain derived from the earliest human influenza A virus isolate, WS/33. Contrary to Zhang et al.'s assertions that the Siberian "ice viruses" are most closely related either to avian influenza virus or to human influenza virus strains from Asia from the 1960s (Zhang et al., J. Virol. 81:2538 erratum, 2007), they are clearly contaminants from the WS/33 positive control used in their laboratory. There is thus no credible evidence that environmental ice acts as a biologically relevant reservoir for influenza viruses. Several additional cases with findings that seem at odds with the biology of influenza virus, including modern-looking avian influenza virus RNA sequences from an archival goose specimen collected in 1917 (T. G. Fanning, R. D. Slemons, A. H. Reid, T. A. Janczewski, J. Dean, and J. K. Taubenberger, J. Virol. 76:7860-7862, 2002), can also be explained by laboratory contamination or other experimental errors. Many putative examples of evolutionary stasis in influenza A virus appear to be due to laboratory artifacts.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Phylogeny; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Phylogenese; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723680540
**Origine de la notice :** INIST

*080181333*
**PASCAL**

# Influenza A Virus Strains Differ in Sensitivity to the Antiviral Action of Mx-GTPase

**Titre :** Influenza A Virus Strains Differ in Sensitivity to the Antiviral Action of Mx-GTPase

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**Source :** Journal of virology. 2008; 82 (7) : 3624-3631
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 47 ref.

**Résumé :** Interferon-mediated host responses are of great importance for controlling influenza A virus infections. It is well established that the interferon-induced Mx proteins possess powerful antiviral activities toward most influenza viruses. Here we analyzed a range of influenza A virus strains for their sensitivities to murine Mxl and human MxA proteins and found remarkable differences. Virus strains of avian origin were highly sensitive to Mxl, whereas strains of human origin showed much weaker responses. Artificial reassortments of the viral components in a minireplicon system identified the viral nucleoprotein as the main target structure of Mxl. Interestingly, the recently reconstructed 1918 H1N1 "Spanish flu" virus was much less sensitive than the highly pathogenic avian H5N1 strain A/Vietnam/1203/04 when tested in a minireplicon system. Importantly, the human 1918 virus-based minireplicon system was almost insensitive to inhibition by human MxA, whereas the avian influenza A virus H5N1-derived system was well controlled by MxA. These findings suggest that Mx proteins provide a formidable hurdle that hinders influenza A viruses of avian origin from crossing the species barrier to humans. They further imply that the observed insensitivity of the 1918 virus-based replicon to the antiviral activity of human MxA is a hitherto unrecognized characteristic of the "Spanish flu" virus that may contribute to the high virulence of this unusual pandemic strain.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Strain; Sensitivity; Antiviral; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Souche; Sensibilite; Antiviral; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723680410
**Origine de la notice :** INIST

*080181310*
**PASCAL**

# Avian Influenza Virus A/HK/483/97(H5N1) NS1 Protein Induces Apoptosis in Human Airway Epithelial Cells

**Titre :** Avian Influenza Virus A/HK/483/97(H5N1) NS1 Protein Induces Apoptosis in Human Airway Epithelial Cells

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**Source :** Journal of virology. 2008; 82 (6) : 2741-2751
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 59 ref.

**Résumé :** Avian H5N1 influenza virus causes a remarkably severe disease in humans, with an overall case fatality rate of greater than 50%. Human influenza A viruses induce apoptosis in infected cells, which can lead to organ dysfunction. To verify the role of H5N1-encoded NS1 in inducing apoptosis, the NS1 gene was cloned and expressed in human airway epithelial cells (NCI-H292 cells). The apoptotic events posttransfection were examined by a terminal deoxynucleotidyltransferase-mediated dUTP-biotin nick-end-labeling assay, flow cytometric measurement of propidium iodide, annexin V staining, and Western blot analyses with antibodies specific for proapoptotic and antiapoptotic proteins. We demonstrated that the expression of H5N1 NS1 protein in NCI-H292 cells was sufficient to induce apoptotic cell death. Western blot analyses also showed that there was prominent cleavage of poly(ADP-ribose) polymerase and activation of caspase-3, caspase-7, and caspase-8 during the NSl-induced apoptosis. The results of caspase inhibitor assays further confirmed the involvement of caspase-dependent pathways in the NS1-induced apoptosis. Interestingly, the ability of H5N1 NS1 protein to induce apoptosis was much enhanced in cells pretreated with Fas ligand (the time posttransfection required to reach >30% apoptosis was reduced from 24 to 6 h). Furthermore, 24 h posttransfection, an increase in Fas ligand mRNA expression of about 5.6-fold was detected in cells transfected with H5N1 NS1. In conclusion, we demonstrated that the NS1 protein encoded by avian influenza A virus H5N1 induced apoptosis in human lung epithelial cells, mainly via the caspase-dependent pathway, which encourages further investigation into the potential for the NS1 protein to be a novel therapeutic target.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenzavirus; Influenza A virus; Human; Protein; Apoptosis; Cell death; Respiratory tract; Epithelial cell; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus aviaire; Virus grippal A; Homme; Proteine; Apoptose; Mort cellulaire; Voie respiratoire; Cellule epitheliale; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723500150
**Origine de la notice :** INIST

*080181301*
**PASCAL**

# Identification of the Progenitors of Indonesian and Vietnamese Avian Influenza A (H5N1) Viruses from Southern China

**Titre :** Identification of the Progenitors of Indonesian and Vietnamese Avian Influenza A (H5N1) Viruses from Southern China

**Auteur(s) :** WANG J; VIJAYKRISHNA D; DUAN L; BAHL J; ZHANG J X; WEBSTER R G; PEIRIS J S M; CHEN H; SMITH Gavin J D; GUAN Y
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**Source :** Journal of virology. 2008; 82 (7) : 3405-3414
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 40 ref.

**Résumé :** The transmission of highly pathogenic avian influenza H5N1 virus to Southeast Asian countries triggered the first major outbreak and transmission wave in late 2003, accelerating the pandemic threat to the world. Due to the lack of influenza surveillance prior to these outbreaks, the genetic diversity and the transmission pathways of H5N1 viruses from this period remain undefined. To determine the possible source of the wave 1 H5N1 viruses, we recently conducted further sequencing and analysis of samples collected in live-poultry markets from Guangdong, Hunan, and Yunnan in southern China from 2001 to 2004. Phylogenetic analysis of the hemagglutinin and neuraminidase genes of 73 H5N1 isolates from this period revealed a greater genetic diversity in southern China than previously reported. Moreover, results show that eight viruses isolated from Yunnan in 2002 and 2003 were most closely related to the clade 1 virus sublineage from Vietnam, Thailand, and Malaysia, while two viruses from Hunan in 2002 and 2003 were most closely related to viruses from Indonesia (clade 2.1). Further phylogenetic analyses of the six internal genes showed that all 10 of those viruses maintained similar phylogenetic relationships as the surface genes. The 10 progenitor viruses were genotype Z and shared high similarity (>=99%) with their corresponding descendant viruses in most gene segments. These results suggest a direct transmission link for H5N1 viruses between Yunnan and Vietnam and also between Hunan and Indonesia during 2002 and 2003. Poultry trade may be responsible for virus introduction to Vietnam, while the transmission route from Hunan to Indonesia remains unclear.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenzavirus; Influenza A virus; Identification; Stem cell; Progenitor cell; Indonesia; China; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Asia
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus aviaire; Virus grippal A; Identification; Cellule souche; Cellule progeniteur; Indonesie; Chine; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Asie

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723680200
**Origine de la notice :** INIST

# Novel Approach to the Development of Effective H5N1 Influenza A Virus Vaccines : Use of M2 Cytoplasmic Tail Mutants

**Titre :** Novel Approach to the Development of Effective H5N1 Influenza A Virus Vaccines : Use of M2 Cytoplasmic Tail Mutants

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**Source :** Journal of virology. 2008; 82 (5) : 2486-2492
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 50 ref.

**Résumé :** Outbreaks of highly pathogenic H5N1 influenza viruses in avian species began in Asia and have since spread to other continents. Concern regarding the pandemic potential of these viruses in humans is clearly warranted, and there is an urgent need to develop effective vaccines against them. Previously, we and others demonstrated that deletions of the M2 cytoplasmic tail caused a growth defect in A/WSN/33 (H1N1) influenza A virus in vitro (K. Iwatsuki-Horimoto, T. Horimoto, T. Noda, M. Kiso, J. Maeda, S. Watanabe, Y. Muramoto, K. Fujii, and Y. Kawaoka, J. Virol. 80:5233-5240, 2006; M. F. McCown and A. Pekosz, J. Virol. 79:3595-3605, 2005; M. F. McCown and A. Pekosz, J. Virol. 80:8178-8189, 2006). We therefore tested the feasibility of using M2 tail mutants as live attenuated vaccines against H5N1 virus. First we generated a series of highly pathogenic H5N1 (A/Vietnam/1203/04 VN1203) M2 cytoplasmic tail deletion mutants and examined their growth properties in vitro and in vivo. We found that one mutant, which contains an 11-amino-acid deletion from the C terminus (M2delll virus), grew as well as the wild-type virus but replicated in mice less efficiently. We then generated a recombinant VN1203M2delll virus whose hemagglutinin (HA) gene was modified by replacing sequences at the cleavage site with those of an avirulent type of HA (M2delll-HAavir virus). This M2delll-HAavir virus protected mice against challenge with lethal doses of homologous (VN1203; clade 1) and antigenically distinct heterologous (A/Indonesia/7/2005; clade 2) H5N1 viruses. Our results suggest that M2 cytoplasmic tail mutants have potential as live attenuated vaccines against H5N1 influenza viruses.

**Code(s) de classement :** 002A05C10; 002A05C07

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Vaccine; Mutation; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Immunology; Pharmacology; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Vaccin; Mutation; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Immunologie; Pharmacologie; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723430440
**Origine de la notice :** INIST

*080149608*
**PASCAL**

# Surge Capacity Mechanical Ventilation. Discussion. Mechanical ventilation in mass casualty scenarios. Part I

**Titre :** Surge Capacity Mechanical Ventilation. Discussion. Mechanical ventilation in mass casualty scenarios. Part I

**Auteur(s) :** BRANSON Richard D; JOHANNIGMAN Jay A; DAUGHERTY Elizabeth L; RUBINSON Lewis; SANDROCK, comment; RITZ; WILGIS; MUSKAT, comment
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**Source :** Respiratory care. 2008; 53 (1) : 78-90
**Informations congrès :** *Respiratory Care Journal Conference, *40, *Reno, Nevada United States, *2007-07-16
**ISSN :** 0020-1324
**CODEN :** RECACP
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial; *Conference-Meeting
**Type de document :** article; comments
**Nombre de références :** 71 ref.

**Résumé :** Mechanical ventilation in a situation of mass casualty respiratory failure will require a substantial increase in the capacity for mechanical ventilation, to prevent unnecessary mortality. Concern over the difficulties of treating large numbers of patients with respiratory failure is exceeded only by our lack of experience on which to base decisions. This review evaluates the likely scenarios that could lead to mass casualty respiratory failure and the types of respiratory failure anticipated. A literature review was conducted, using the National Library of Medicine Medical Subject Headings terms "mass casualty respiratory failure," "pandemic flu," "disaster preparedness," and "mass casualty care." Papers were reviewed for relevance to the topic. There is little historical or empirical evidence upon which to base decisions regarding mass casualty respiratory failure and augmenting positive-pressure ventilation capacity. Matching the degree of respiratory impairment anticipated from the most likely mass casualty scenarios allows conclusions to be drawn regarding the performance characteristics of ventilators required for these situations. Little is known about the success of mechanical-ventilator stockpiling for mass casualty respiratory failure. Careful planning with an emphasis on matching ventilator performance to patient need and caregiver skill is critical to appropriate stockpile choices..

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

**Descripteur(s) anglais**
*Descripteur(s) :* Mechanical ventilation; Resuscitation; Intensive care
*Desc. génériques :* Resuscitation; Intensive care medicine; Medical sciences; Pneumology; Respiratory system; Resuscitation; Intensive care medicine; Medical sciences
**Descripteur(s) français**
*Descripteur(s) :* Ventilation mecanique; Reanimation; Soin intensif
*Desc. génériques :* Reanimation; Soins intensifs; Sciences medicales; Pneumologie; Appareil respiratoire; Reanimation; Soins intensifs; Sciences medicales

**Localisation :** INIST, Shelf number 15553, INIST No. 354000162743760040
**Origine de la notice :** INIST

*080149615*
**PASCAL**

# Strategies for Providing Mechanical Ventilation in a Mass Casualty Incident : Distribution Versus Stockpiling. Discussion. Mechanical ventilation in mass casualty scenarios. Part I

**Titre :** Strategies for Providing Mechanical Ventilation in a Mass Casualty Incident : Distribution Versus Stockpiling. Discussion. Mechanical ventilation in mass casualty scenarios. Part I

**Auteur(s) :** WILGIS John; RUBINSON, comment; TALMOR, comment; BRANSON, comment; TALMOR, comment
**Auteur(s) :** American Respiratory Care Foundation, Irving, TX, United States, org cong.
**Affiliation(s) :** Emergency Management Services, Florida Hospital Association, Tallahassee, Florida, United States

**Source :** Respiratory care. 2008; 53 (1) : 96-103
**Informations congrès :** *Respiratory Care Journal Conference, *40, *Reno, Nevada United States, *2007-07-16
**ISSN :** 0020-1324
**CODEN :** RECACP
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial; *Conference-Meeting
**Type de document :** article; comments
**Nombre de références :** 6 ref.

**Résumé :** Federal funding provides state public and private health care systems the ability to build and maintain a reserve supply of ventilators for emergency response to mass casualty incidents. Studying and planning the ventilator reserve capability requires subject-matter expertise, identification of best mechanical-ventilation practices and quality care standards, and contingency planning. Natural disasters such as pandemic influenza, or man-made disasters such as bioterrorism could necessitate field use of numerous mechanical ventilators. This paper discusses the pros and cons of stockpiling ventilators at one site (to be distributed as needed to disaster areas) versus increasing the number of ventilators at all hospitals. Respiratory-device corporations, respiratory professional associations, and respiratory therapists should be involved in the planning and development of respiratory mass casualty response systems.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Mechanical ventilation; Comparative study; Emergency; Clinical management; Health service; Planning; Public health; Ventilator; Resuscitation; Intensive care
*Desc. génériques :* Resuscitation; Intensive care medicine; Medical sciences; Pneumology; Respiratory system; Resuscitation; Intensive care medicine; Medical sciences
**Descripteur(s) français**
*Descripteur(s) :* Ventilation mecanique; Etude comparative; Urgence; Conduite a tenir; Service sante; Planification; Sante publique; Insufflateur; Reanimation; Soin intensif
*Desc. génériques :* Reanimation; Soins intensifs; Sciences medicales; Pneumologie; Appareil respiratoire; Reanimation; Soins intensifs; Sciences medicales

**Localisation :** INIST, Shelf number 15553, INIST No. 354000162743760060
**Origine de la notice :** INIST

*080150470*
**PASCAL**

# Emerging influenza. Respiratory viruses

**Titre :** Emerging influenza. Respiratory viruses

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**Source :** Journal of clinical virology. 2008; 41 (1) : 1-6
**ISSN :** 1386-6532
**Date de publication :** 2008
**Pays de publication :** Netherlands
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 1 p.

**Résumé :** In 1918 the Spanish influenza pandemic, caused by an avian H1N1 virus, resulted in over 50 million deaths worldwide. Several outbreaks of H7 influenza A viruses have resulted in human cases, including one fatal case. Since 1997, the outbreaks of highly pathogenic avian influenza (HPAI) of the H5N1 subtype have affected a wide variety of mammals in addition to poultry and wild birds. Here, we give an overview of the current knowledge of the determinants of pathogenicity of these three subtypes of avian influenza A virus in mammals. Common mechanisms for acquisition of virulence and replication of these avian influenza viruses in mammals are becoming apparent. Therefore, monitoring these and additional genetic changes upon zoonotic infections is important. Identification of genetic changes responsible for transmission between mammals will be an important task for the near future.

**Code(s) de classement :** 002A05C10; 002B05C02J; 002A05C04

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Pathogenesis; Microbiology; Virology; Influenza
*Desc. génériques :* Virology; Microbiology; Biological sciences; Virology; Infectious diseases; Medical sciences; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Viral disease; Infection
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Pathogenie; Microbiologie; Virologie; Grippe
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Virologie; Maladies infectieuses; Sciences medicales; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Virose; Infection

**Localisation :** INIST, Shelf number 26272, INIST No. 354000174536980010
**Origine de la notice :** INIST

*080151412*
**PASCAL**

# Mutations of neuraminidase implicated in neuraminidase inhibitors resistance. Respiratory viruses

**Titre :** Mutations of neuraminidase implicated in neuraminidase inhibitors resistance. Respiratory viruses

**Auteur(s) :** FERRARIS Olivier; LINA Bruno; LINA Bruno, limin
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**Source :** Journal of clinical virology. 2008; 41 (1) : 13-19
**ISSN :** 1386-6532
**Date de publication :** 2008
**Pays de publication :** Netherlands
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 1 p.1/2

**Résumé :** Influenza constitutes one of the most important upper respiratory tract infections regarding morbidity, and mortality. Prevention and treatment of influenza rely on inactivated vaccines and antiviral drugs. Zanamivir and Oseltamivir, the currently available influenza neuraminidase inhibitors (NAI) can be used in clinical practice for the treatment of influenza infection. These drugs have also shown their efficacy against highly pathogenic avian influenza. Recent transmission of avian H7N7 and H5N1 influenza virus to human emphasized the need for active antiviral against emerging influenza viruses. Since their introduction in clinical practice, numerous studies have been implemented to determine the rate of emergence of NAI resistant isolates. These studies describe mechanisms of resistance associated to mutations in the neuraminidase protein, and their consequence in virus fitness and transmission. This review is summarizing the mutations described in human and avian influenza neuraminidases that are associated to resistance or reduction in sensitivity.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Mutation; Exo <alpha> sialidase; Resistance; Antiviral; Microbiology; Virology; Influenza
*Desc. génériques :* Virology; Microbiology; Biological sciences; Virology; Infectious diseases; Medical sciences; Glycosidases; Glycosylases; Hydrolases; Enzyme; Viral disease; Infection
**Descripteur(s) français**
*Descripteur(s) :* Mutation; Exo <alpha> sialidase; Resistance; Antiviral; Microbiologie; Virologie; Grippe
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Virologie; Maladies infectieuses; Sciences medicales; Glycosidases; Glycosylases; Hydrolases; Enzyme; Virose; Infection

**Localisation :** INIST, Shelf number 26272, INIST No. 354000174536980030
**Origine de la notice :** INIST

# Simultaneous detection and differentiation of Newcastle disease and avian influenza viruses using oligonucleotide microarrays

**Titre :** Simultaneous detection and differentiation of Newcastle disease and avian influenza viruses using oligonucleotide microarrays

**Auteur(s) :** WANG Lih Chiann; PAN Chu Hsiang; SEVERINGHAUS Lucia Liu; LIU Lu Yuan; CHEN Chi Tsong; PUF Chang En; HUANG Dean; LIR Jihn Tsair; CHIN Shih Chien; CHENG Ming Chu; LEE Shu Hwae; WANG Ching Ho
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**Source :** Veterinary microbiology Amsterdam. 2008; 127 (3-4) : 217-226
**ISSN :** 0378-1135
**CODEN :** VMICDQ
**Date de publication :** 2008
**Pays de publication :** Netherlands
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 1 p.1/4

**Résumé :** Newcastle disease (ND) and avian influenza (AI) are two of the most important zoonotic viral diseases of birds throughout the world. These two viruses often have a great impact upon the poultry industry. Both viruses are associated with transmission from wild to domestic birds, and often display similar signs that need to be differentiated. A rapid surveillance among wild and domestic birds is important for early disease detection and intervention, and is the basis for what measures should be taken. The surveillance, thus, should be able to differentiate the diseases and provide a detailed analysis of the virus strains. Here, we described a fast, simultaneous and inexpensive approach to the detection of Newcastle disease virus (NDV) and avian influenza virus (AIV) using oligonucleotide microarrays. The NDV pathotypes and the AIV haemagglutinin subtypes H5 and H7 were determined at the same time. Different probes on a microarray targeting the same gene were implemented in order to encompass the diversified virus strains or provide multiple confirmations of the genotype. This ensures good sensitivity and specificity among divergent viruses. Twenty-four virus isolates and twenty-four various combinations of the viruses were tested in this study. All viruses were successfully detected and typed. The hybridization results on microarrays were clearly identified with the naked eyes, with no further imaging equipment needed. The results demonstrate that the detection and typing of multiple viruses can be performed simultaneously and easily using oligonucleotide microarrays. The proposed method may provide potential for rapid surveillance and differential diagnosis of these two important zoonoses in both wild and domestic birds.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenzavirus; Detection; Newcastle disease; Avian influenza
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Veterinary; Viral disease; Infection; Zoopathogen
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus aviaire; Detection; Maladie de Newcastle; Grippe aviaire
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus;

Veterinaire; Virose; Infection; Zoopathogene

*080158301*
**PASCAL**

# CTA1-M2e-DD : A novel mucosal adjuvant targeted influenza vaccine

**Titre :** CTA1-M2e-DD : A novel mucosal adjuvant targeted influenza vaccine

**Auteur(s) :** GRDIC ELIASSON Dubravka; EL BAKKOURI Karim; SCHON Karin; RAMNE Anna; FESTJENS Els; LOWENADLER Bjdrn; FIERS Walter; SAELENS Xavier; LYCKE Nils
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**Source :** Vaccine . 2008; 26 (9) : 1243-1252
**ISSN :** 0264-410X
**CODEN :** VACCDE
**Date de publication :** 2008
**Pays de publication :** United Kingdom
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 63 ref.

**Résumé :** At present few vaccine candidates exists against potentially pandemic influenza virus infections. We provide compelling evidence that a targeted fusion protein based on the CTA1-DD adjuvant and containing tandem repeats of the matrix protein 2 (M2e) ectodomain epitope, CTA1-3M2e-DD, confers strong protective immunity against a potentially lethal challenge infection with influenza virus in mice. The formulation was highly effective for mucosal immunizations and promoted high M2e-specific serum IgG and mucosal IgA antibody titers and an hitherto unknown anti-M2e CD4 T cell immunity. This novel CTA1-3M2e-DD fusion protein combines adjuvant and a conserved influenza A antigen in a promising candidate for a universal anti-influenza vaccine.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Mucosa; Immunological adjuvant; Vaccine; Vaccination; IgA; Immunomodulation; Spleen; Lymph node; Influenza; Antigen; Peptides; Antigenic determinant
*Desc. génériques :* Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Viral disease; Infection
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Muqueuse; Adjuvant immunologique; Vaccin; Vaccination; IgA; Immunomodulation; Rate; Ganglion lymphatique; Grippe; Antigene; Peptide; Determinant antigenique
*Desc. génériques :* Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Virose; Infection

**Localisation :** INIST, Shelf number 20289, INIST No. 354000175098950120
**Origine de la notice :** INIST

# A Naturally Occurring Deletion in Its NS Gene Contributes to the Attenuation of an H5N1 Swine Influenza Virus in Chickens

**Titre :** A Naturally Occurring Deletion in Its NS Gene Contributes to the Attenuation of an H5N1 Swine Influenza Virus in Chickens

**Auteur(s) :** QIYUN ZHU; HUANLIANG YANG; WEIYE CHEN; WENYAN CAO; GONGXUN ZHONG; PEIRONG JIAO; GUOHUA DENG; KANGZHEN YU; CHINGLAI YANG; ZHIGAO BU; YOSHIHIRO KAWAOKA; HUALAN CHEN
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**Source :** Journal of virology. 2008; 82 (1) : 220-228
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 42 ref.

**Résumé :** In 2001 and 2003, we isolated two H5N1 viruses, A/swine/Fujian/1/01 (SW/FJ/01) and A/swine/Fujian/ 1/03 (SW/FJ/03), from pigs in Fujian Province, southern China. Genetically, these two viruses are similar, although the NS gene of the SW/FJ/03 virus has a 15-nucleotide deletion at coding positions 612 to 626. The SW/FJ/01 virus is highly lethal for chickens, whereas the SW/FJ/03 virus is nonpathogenic for chickens when administrated intravenously or intranasally. To understand the molecular basis for the difference in virulence, we used reverse genetics to create a series of single-gene recombinants of both viruses. We found that a recombinant virus containing the mutated NS gene from the SW/FJ/03 virus in the SW/FJ/01 virus background was completely attenuated in chickens. We also found that viruses expressing the mutant NS1 protein of SW/FJ/03 did not antagonize the induction of interferon (IFN) protein. Conversely, only the recombinant virus containing the wild-type SW/FJ/01 NS gene in the SW/FJ/03 background was lethal in chickens and antagonized IFN protein levels. Further, we proved that the NS1 genes of the two viruses differ in their stabilities in the host cells and in their abilities to interact with the chicken cleavage and polyadenylation specificity factor. These results indicate that the deletion of amino acids 191 to 195 of the NS1 protein is critical for the attenuation of the SW/FJ/03 virus in chickens and that this deletion affects the ability of the virus to antagonize IFN induction in host cells.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Swine; Pig; Influenzavirus; Chicken; Deletion; Mutation; Gene; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Artiodactyla; Ungulata; Mammalia; Vertebrata; Orthomyxoviridae; Virus; Aves; Veterinary
**Descripteur(s) français**
*Descripteur(s) :* Porcin; Porc; Influenzavirus; Poulet; Deletion; Mutation; Gene; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Artiodactyla; Ungulata; Mammalia; Vertebrata; Orthomyxoviridae; Virus; Aves; Veterinaire

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723010200
**Origine de la notice :** INIST

*080179020*
**PASCAL**

# In vitro and in vivo protection against the highly pathogenic H5N1 influenza virus by an antisense phosphorothioate oligonucleotide

**Titre :** In vitro and in vivo protection against the highly pathogenic H5N1 influenza virus by an antisense phosphorothioate oligonucleotide

**Auteur(s) :** MING DUAN; ZHE ZHOU; LIN Ru Xian; JING YANG; XIA Xian Zhu; WANG Sheng Qi
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**Source :** Antiviral therapy London. 2008; 13 (1) : 109-114
**ISSN :** 1359-6535
**Date de publication :** 2008
**Pays de publication :** United Kingdom
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 40 ref.

**Résumé :** Background: Current vaccination strategies and antiviral drugs only provide limited protection against influenza virus infection. In this study, we investigated the use of a novel antisense oligonucleotide (named IV-AS), which is specific for the 5'-terminal conserved sequence found in all eight viral RNA segments of influenza A virus. Methods: The activity of IV-AS was monitored both in vitro, in Madin-Darby canine kidney (MDCK) cells, and in vivo using a mouse model. IV-AS was given intranasally to H5N1-infected mice once daily for 6 days starting 6 h after infection. A three-base mismatch of IV-AS was used as a control. Results: IV-AS inhibited influenza virus A induced cytopathic effects in MDCK cells with the 50% effective concentration (EC<sub>5<sub>0) ranging from 2.2 to 4.4 <mu>M. IV-AS was effective against H5N1 virus in preventing death, lessening weight reduction, inhibiting lung consolidation and reducing lung virus titres. Dosages of 40 and 60 mg/kg/day provided 40% and 60% survival rates and prolonged mean survival days in comparison with the infected control group (P<0.05). The lung index in mice treated with IV-AS, at a dose of 20, 40 or 60 mg/kg/day, had been inhibited on day 4 or 6 (P<0.05 or P<0.01); virus titres in lung had declined to 2.42, 1.51 and 1.54 log<sub>1<sub>0 TCID<sub>5<sub>0/g of lung, respectively, whereas the yields in the infected control mice were 6.00 log<sub>1<sub>0 TCID<sub>5<sub>0/g of lung. Conclusions: Our results suggest that the 5'-terminal conserved region of influenza A virus RNA segments can be targeted using antisense technology; therefore, IV-AS is a potential drug for prophylaxis and control of influenza virus infections.

**Code(s) de classement :** 002B02S05

**Descripteur(s) anglais**
*Descripteur(s) :* In vitro; In vivo; Protection; Pathogenicity; Antisense oligonucleotide; Organic thiophosphate; Influenzavirus AH5N1
*Desc. génériques :* Virology; Infectious diseases; Pharmacology; Medical sciences
**Descripteur(s) français**
*Descripteur(s) :* In vitro; In vivo; Protection; Pouvoir pathogene; Oligonucleotide antisens; Thiophosphate organique; Influenzavirus AH5N1
*Desc. génériques :* Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales

**Localisation :** INIST, Shelf number 27047, INIST No. 354000175188880120
**Origine de la notice :** INIST

*080170390*
**PASCAL**

# A multiplex real-time RT-PCR for detection and identification of influenza virus types A and B and subtypes H5 and N1

**Titre :** A multiplex real-time RT-PCR for detection and identification of influenza virus types A and B and subtypes H5 and N1

**Auteur(s) :** CHUNLI WU; XIAOWEN CHENG; JIANFAN HE; XING LV; JINGWEN WANG; RIQIANG DENG; QINGXING LONG; XUNZHANG WANG
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**Source :** Journal of virological methods. 2008; 148 (1-2) : 81-88
**ISSN :** 0166-0934
**CODEN :** JVMEDH
**Date de publication :** 2008
**Pays de publication :** Netherlands
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 3/4 p.

**Résumé :** A multiplex real-time RT-PCR method for the simultaneous detection of influenza virus types A and B and identification of subtypes H5 and N1 in a single tube is described. The method was developed with four sets of primers and probes which were specific to influenza virus (sub)types A, B, H5, and N1, and evaluated by using a total of 40 influenza virus reference strains, including 17 avian influenza A (12 H5N1, 1 H1N1, 1 H3N2,1 H4N6,1 H7N3, and 1 H9N2), 18 human influenza A (11 H3N2, 6 H1N1 and 1 H5N1) and 5 influenza B viruses. The method exhibited a high specificity and sensitivity of approximately 10<sup>1-10<sup>2 copies/<mu>l for each (sub)type and a high reproducibility with intra- and inter-assay CV from 0.13 to 4.24%. In an analysis of 189 clinical samples from patients during the year 2004 and 2005, the method identified 81 positive samples (42.9%) and identified simultaneously 14 type B samples and 11 subtype N1 samples, in comparison only 46 positive samples (24.3%) identified by the conventional culturing method. The method would be a useful molecular diagnostic tool for large-scale screening of clinical samples for influenza virus.

**Code(s) de classement :** 002A05C09

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Influenza B virus; Influenzavirus; Multiplex polymerase chain reaction; Real time; Reverse transcription polymerase chain reaction; Detection; Identification; Subtype; Microbiology; Method; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Influenzavirus B
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Virus grippal B; Influenzavirus; Reaction chaine polymerase multiplex; Temps reel; Reaction chaine polymerase RT; Detection; Identification; Soustype; Microbiologie; Methode; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Influenzavirus B

**Localisation :** INIST, Shelf number 18295, INIST No. 354000175181510110
**Origine de la notice :** INIST

*080167299*
**PASCAL**

# Separation ofShikimic Acid from Pine Needles

**Titre :** Separation ofShikimic Acid from Pine Needles

**Auteur(s) :** RUOHONG SUI
**Affiliation(s) :** Department of Chemistry, University of Calgary, Calgary, Alberta, Canada

**Source :** Chemical engineering and technology. 2008; 31 (3) : 469-473
**ISSN :** 0930-7516
**CODEN :** CETEER
**Date de publication :** 2008
**Pays de publication :** Germany
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 15 ref.

**Résumé :** Shikimic acid is used as a precursor for the synthesis of oseltamivir phosphate (Tamiflu<Registered>), which is used as an anti-viral for the H5N1 strain. As concern for this virus increases, demand for medicinal products capable of treating it increases, while shikimic acid resources remain limited. In this study, for the first time shikimic acid is extracted from pine needles using water at relatively low temperature. After the subsequent evaporation, column adsorption/desorption and crystallization processes, shikimic acid crystals with a purity of over 98 % are obtained. A total recovery of approximately 85 % is reached, with the highlights of the method being simplicity, low cost and industrial practicality.

**Code(s) de classement :** 001D07K; 001D07O

**Descripteur(s) anglais**
*Descripteur(s) :* Biological indicator; Precursor; Extract; Low temperature; Evaporation; Adsorption; Desorption; Crystallization; Purity
*Desc. génériques :* Adsorption; Chemical engineering; Applied sciences; Chemical engineering; Applied sciences
**Descripteur(s) français**
*Descripteur(s) :* Indicateur biologique; Precurseur; Extrait; Basse temperature; Evaporation; Adsorption; Desorption; Cristallisation; Purete
*Desc. génériques :* Adsorption; Genie chimique; Sciences appliquees; Genie chimique; Sciences appliquees

**Localisation :** INIST, Shelf number 20728, INIST No. 354000173616280180
**Origine de la notice :** INIST


 

*080164639*
**PASCAL**

# Expert forecast on emerging biological risks related to occupational safety and health

**Titre :** Expert forecast on emerging biological risks related to occupational safety and health

**Auteur(s) :** BRUN Emmanuelle; VAN HERPE Steeve; LAAMANEN Irja; et al
**Auteur(s) :** European Agency for Safety and Health at Work OSHA Bilbao, Spain; Agence Europeenne pour la Sante et la Securite au Travail OSHA Bilbao, Spain
**Source :** 2007; 145 p.; pdf, tabl., fig.
**Éditeur :** s.n., s.l.
**ISBN :** 9291911305
**Date de publication :** 2007
**Pays de publication :** International
**Langue(s) :** English
**Type de document :** Book
**Nombre de références :** 361 ref.

**Résumé :** Dans ce rapport, l' Observatoire europeen des risques (European Risk Observatory) identifie les risques biologiques emergents qui sont les plus susceptibles d' affecter les travailleurs de l' Union europeenne. Les agriculteurs, les professionnels du secteur de sante ou le personnel des secteurs industriels en developpement, tels que celui du traitement des dechets, sont particulierement concernes. Les maladies transmissibles, comme le syndrome respiratoire aigu severe (SRAS), la grippe aviaire ou la dengue sont de plus en plus preoccupantes. On estime que 320 000 travailleurs meurent chaque annee dans le monde entier des suites d' une maladie transmissible, causee par des risques biologiques viraux, bacteriens, lies a un insecte ou a un animal

**Code(s) de classement :** 002B30A11

**Descripteur(s) anglais**
*Descripteur(s) :* Occupational hygiene; Work safety; Occupational environment; Risk; Occupational disease; Emerging disease; Occupational exposure; Risk factor; Infection; Microorganism; Virus; Bacteria; Animal; Insecta
*Desc. génériques :* Public health; Medical sciences; Arthropoda; Invertebrata
**Descripteur(s) français**
*Descripteur(s) :* Hygiene travail; Securite travail; Milieu professionnel; Risque; Maladie professionnelle; Maladie emergente; Exposition professionnelle; Facteur risque; Infection; Microorganisme; Virus; Bacterie; Animal; Insecta
*Desc. génériques :* Sante publique; Sciences medicales; Arthropoda; Invertebrata

**Localisation :** BDSP/EHESP, Shelf number 164656
**Origine de la notice :** BDSP

*080164281*
**PASCAL**

# Strategie de lutte contre la grippe aviaire au Laos

**Titre :** Strategie de lutte contre la grippe aviaire au Laos

**Auteur(s) :** FRANON Evelyne
**Auteur(s) :** Universite de Bourgogne Dijon, France, tutelle
**Source :** 2007; 2007; 40; 112 p.
**Informations thèse :** These d'exercice, 2007, 2007
**Éditeur :** Universite de Bourgogne. Dijon.. France
**Date de publication :** 2007
**Pays de publication :** France
**Langue(s) :** French
**Type de document :** Thesis

**Code(s) de classement :** 002B30A11

**Descripteur(s) anglais**
*Descripteur(s) :* Epidemic; Laos; Strategy; Prevention
*Desc. génériques :* Public health; Medical sciences; Asia
**Descripteur(s) français**
*Descripteur(s) :* Epidemie; Laos; Strategie; Prevention
*Desc. génériques :* Sante publique; Sciences medicales; Asie

**Localisation :** BDSP/BIUM, Shelf number DIJON-2007-40
**Origine de la notice :** BDSP

*080163270*
**PASCAL**

# The Current Status of Planning for Pandemic Influenza and Implications for Health Care Planning in the United States

**Titre :** The Current Status of Planning for Pandemic Influenza and Implications for Health Care Planning in the United States

**Auteur(s) :** BARTLETT John G; BORIO Luciana
**Affiliation(s) :** Department of Medicine, Johns Hopkins University School of Medicine, United States; Center for Biosecurity, University of Pittsburgh Medical Center, Baltimore, Maryland, United States

**Source :** Clinical infectious diseases. 2008; 46 (6) : 919-925
**ISSN :** 1058-4838
**CODEN :** CIDIEL
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 32 ref.

**Résumé :** The United States needs to be better prepared for a large-scale medical catastrophe, be it a natural disaster, a bioterrorism act, or a pandemic. There are substantial planning efforts now devoted to responding to an influenza pandemic. Here, we review these efforts and identify some harsh realities: (1) the US health care system is private, competitive, broke, and at capacity, so that any demand for surge cannot be met with existing economic resources, hospital beds, manpower, or supplies; (2) the emphasis placed on the development and rapid production of an effective vaccine is excellent, but the effort is underfunded to meet global demand; (3) and the Centers for Disease Control and Prevention's community mitigation measures, such as the use nonpharmacological and social interventions (e.g., use of face masks or respirators, social distancing, and closure of schools), lack validation and could have substantial indirect and unintended consequences. Finally, international collaborations are essential for disease surveillance and to assure investigator access to influenza strains, equitable vaccine distribution, and availability of critical supplies from offshore sources.

**Code(s) de classement :** 002B05C02C

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza; Planning; United States
*Desc. génériques :* Virology; Infectious diseases; Medical sciences; Viral disease; Infection; North America; America
**Descripteur(s) français**
*Descripteur(s) :* Grippe; Planification; Etats Unis; Pandemie
*Desc. génériques :* Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Amerique du Nord; Amerique

**Localisation :** INIST, Shelf number 18407, INIST No. 354000173623030190
**Origine de la notice :** INIST

*080161608*
**PASCAL**

# Organisation de la reanimation en situation de pandemie de grippe aviaire; The organisation of intensive care in a situation of pandemic avian influenza

**Titre :** Organisation de la reanimation en situation de pandemie de grippe aviaire; The organisation of intensive care in a situation of pandemic avian influenza

**Auteur(s) :** GUERY B; GUIDET B; BELOUCIF S; FLORET D; LE GALL C; MONTRAVERS P; CHOUAID C; JARREAU P H; REGNIER B
**Affiliation(s) :** la Societe de Pathologie Infectieuse de Langue Francaise, Paris, France; la Societe de Reanimation de Langue Francaise, Paris, France; la Societe Francaise d'Anesthesie-Reanimation, Paris, France; le Groupe Francophone de Reanimation et Urgences Pediatriques, France; la Societe Francaise de Medecine d'Urgence, Paris, France; la Societe de Pneumologie de Langue Francaise, Paris, France; la Societe Francaise de Neonatologie, France

**Source :** Revue des maladies respiratoires. 2008; 25 (2) : 223-235
**ISSN :** 0761-8425
**CODEN :** RMREEY
**Date de publication :** 2008
**Pays de publication :** France
**Langue(s) :** French
**Langue(s) du résumé :** English
**Type de document :** Serial
**Nombre de références :** 22 ref.

**Résumé :** La survenue d' une epidemie de grippe aviaire aura un impact majeur sur l' organisation et la structuration des etablissements de soins. Ce texte, issu d' une collaboration entre les six societes savantes concernees, analyse l' impact d' une eventuelle pandemie sur les differents aspects de la prise en charge des patients necessitant de la reanimation. Il decrit l' organisation des filieres hospitalieres pour les patients non grippes et grippes, avec en particulier les actions necessaires en terme de sectorisation des soins, de triage des patients et de deprogrammation d' activites non urgentes. Il analyse les prealables necessaires au bon fonctionnellement des reanimations et les facteurs limitants previsibles. Il souligne l' importance de la formation du personnel medical et paramedical. Enfin, il aborde les problemes specifiques de la reanimation pediatrique : organisation, capacite d' accueil et formation.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenza; Respiratory disease; Public health; Human; Organization; Resuscitation; Intensive care; Pneumology
*Desc. génériques :* Pneumology; Respiratory system; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
**Descripteur(s) français**
*Descripteur(s) :* Grippe aviaire; Pathologie de l' appareil respiratoire; Sante publique; Homme; Organisation; Reanimation; Soin intensif; Pneumologie
*Desc. génériques :* Pneumologie; Appareil respiratoire; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection

**Localisation :** INIST, Shelf number 3501, INIST No. 354000161757550100
**Origine de la notice :** INIST

*080159280*
**PASCAL**

# H5N1 avian influenza re-emergence of Lake Qinghai : phylogenetic and antigenic analyses of the newly isolated viruses and roles of migratory birds in virus circulation

**Titre :** H5N1 avian influenza re-emergence of Lake Qinghai : phylogenetic and antigenic analyses of the newly isolated viruses and roles of migratory birds in virus circulation

**Auteur(s) :** GUIHUA WANG; DAWEI ZHAN; LAIXING LI; FUMIN LEI; BOHUA LIU; DI LIU; HAIXIA XIAO; YOUJUN FENG; JING LI; BAOAN YANG; ZUOHUA YIN; XIAOHUI SONG; XIAOJIA ZHU; YANLONG CONG; JUAN PU; JIAN WANG; JINHUA LIU; GAO George F; QINGYU ZHU
**Affiliation(s) :** center for Molecular Virology and Center for Molecular Immunology, Institute of Microbiology, Chinese Academy of Sciences, Beijing 100101, China; Graduate University, Chinese Academy of Sciences, Beijing 100049, China; China-Japan Joint Laboratory of Molecular Immunology and Molecular Microbiology, Institute of Microbiology, Chinese Academy of Sciences, Beijing 100080, China; State Key Laboratory of Pathogens and Biosecurity, Academy of Military Medical Sciences, Beijing 100071, China; Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing 100071, China; Northwest Institute of Plateau Biology, Chinese Academy of Sciences, Xi'ning 810008, China; institute of Zoology, Chinese Academy of Sciences, Beijing 100080, China; college of Veterinary Medicine, China Agricultural University, Beijing 100094, China; Beijing Genomics Institute, Chinese Academy of Sciences, Beijing 101300, China

**Source :** Journal of general virology. 2008; 89 (p. 3) : 697-702
**ISSN :** 0022-1317
**CODEN :** JGVIAY
**Date de publication :** 2008
**Pays de publication :** United Kingdom
**Langue(s) :** English
**Type de document :** Serial
**Type de document :** short-communication
**Nombre de références :** 3/4 p.

**Résumé :** Highly pathogenic avian influenza H5N1 virus has swept west across the globe and caused serious debates on the roles of migratory birds in virus circulation since the first large-scale outbreak in migratory birds of Lake Qinghai, 2005. In May 2006, another outbreak struck Lake Qinghai and six novel strains were isolated. To elucidate these QH06 viruses, the six isolates were subjected to whole-genome sequencing. Phylogenetic analyses show that QH06 viruses are derived from the lineages of Lake Qinghai, 2005. Five of the six novel isolates are adjacent to the strain A/Cygnus olor/Croatia/1/05, and the last one is related to the strain A/duck/Novosibirsk/ 02/05, an isolate of the flyway. Antigenic analyses suggest that QH06 and QH05 viruses are similar to each other. These findings implicate that QH06 viruses of Lake Qinghai may travel back via migratory birds, though not ruling out the possibility of local circulation of viruses of Lake Qinghai.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Aves; Phylogeny; Microbiology; Avian influenza
*Desc. génériques :* Virology; Microbiology; Biological sciences; Vertebrata; Infection; Viral disease
**Descripteur(s) français**
*Descripteur(s) :* Aves; Phylogenese; Microbiologie; Grippe aviaire
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Vertebrata; Infection; Virose

**Localisation :** INIST, Shelf number 13533, INIST No. 354000175190680100
**Origine de la notice :** INIST

*080159044*
**PASCAL**

# Immunomodulatory Activity of Shikimic Acid and Quercitin in Comparison With Oseltamivir (Tamiflu) in an "In Vitro" Model

**Titre :** Immunomodulatory Activity of Shikimic Acid and Quercitin in Comparison With Oseltamivir (Tamiflu) in an "In Vitro" Model

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**Source :** Journal of medical virology. 2008; 80 (4) : 741-745
**ISSN :** 0146-6615
**CODEN :** JMVIDB
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 3/4 p.

**Résumé :** The risk of an avian influenza pandemic has put oseltamivir (Tamiflu<Registered>) in the spotlight and has given rise to rumorsthatshikimic acid (SK), which is used for the synthesis of Tamiflu<Registered>, possesses therapeutic activity. This study was undertaken to determine whether SK, either alone or in combination with quercitin (QT) is able to modulate the release of IL-6 and IL-8 from peripheral blood mononuclear cells (PBMCs). The experiments were conducted comparing the properties of SK, both alone and in combination, with those of Tamiflu<Registered>. The incubation of PBMCs with 100 nM Tamiflu<Registered> or SK at two concentrations (10 nM; 100 nM) did not produce any change in IL-6 and IL-8 baseline levels (data expressed as incremental change vs. baseline). On the contrary, incubation with SK and QT at both concentrations (10 and 100 nM) produced a significant increase in the release of IL-8 as compared to other groups (4.19<plus or minus sign>0.82, SK-QT 10 nM; 3.83<plus or minus sign>1.17 SK-QT 100 nM,P< 0.05 vs. baseline1.00 + 0.10,Tamiflu<Registered> 100 nM 1.35<plus or minus sign>0.16,SK10nM 1.68<plus or minus sign>0.15 and SK 100 nM 1.80 <plus or minus sign>0.48). The SK-QT combination also proved to be effective in the upregulation of IL-6 (3.08 <plus or minus sign> 0.46, SK-QT 10 nM; 3.60<plus or minus sign>0.74 SK-QT100 nM, P<0.05 vs. baseline 1.00<plus or minus sign>0.26). According to these findings SK alone is not able to modulate innate immunity in antiviral terms. However, the data show that the SK + QT combination, even at low doses, may be effective for the modulation of innate immunity.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Immunomodulator; Comparative study; In vitro; Models; Interleukin; Cytokine; Oseltamivir; Antiviral
*Desc. génériques :* Virology; Microbiology; Biological sciences; Virology; Infectious diseases; Medical sciences
**Descripteur(s) français**
*Descripteur(s) :* Immunomodulateur; Etude comparative; In vitro; Modele; Interleukine; Cytokine; Oseltamivir; Antiviral
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Virologie; Maladies infectieuses; Sciences medicales

**Localisation :** INIST, Shelf number 17422, INIST No. 354000173603560250
**Origine de la notice :** INIST

*080181180*
**PASCAL**

# Vaccination of Macaques with Adjuvanted Formalin-Inactivated Influenza A Virus (H5N1) Vaccines : Protection against H5N1 Challenge without Disease Enhancement

**Titre :** Vaccination of Macaques with Adjuvanted Formalin-Inactivated Influenza A Virus (H5N1) Vaccines : Protection against H5N1 Challenge without Disease Enhancement

**Auteur(s) :** RUAT Caroline; CAILLET Catherine; BIDAUT Alexandre; SIMON James; OSTERHAUS Albert D M E
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**Source :** Journal of virology. 2008; 82 (5) : 2565-2569
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 14 ref.

**Résumé :** We investigated the ability of adjuvanted, inactivated split-virion influenza A virus (H5N1) vaccines to protect against infection and demonstrated that the disease exacerbation phenomenon seen with adjuvanted formaldehyde-inactivated respiratory syncytial virus and measles virus investigational vaccines did not occur with these H5N1 vaccines. Macaques were vaccinated twice with or without an aluminum hydroxide or oil-in-water emulsion adjuvanted vaccine. Three months later, animals were challenged with homologous wild-type H5N1. No signs of vaccine-induced disease exacerbation were seen. With either adjuvant, vaccination induced functional and cross-reactive antibodies and protected the lungs and upper respiratory tract. Without an adjuvant, the vaccine provided partial protection. Best results were obtained with the emulsion adjuvant.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza A virus; Vaccination; Immunological adjuvant; Inactivated strain; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Virus grippal A; Vaccination; Adjuvant immunologique; Souche inactivee; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723430520
**Origine de la notice :** INIST

*080181168*
**PASCAL**

# H5-Type Influenza Virus Hemagglutinin Is Functionally Recognized by the Natural Killer-Activating Receptor NKp44

**Titre :** H5-Type Influenza Virus Hemagglutinin Is Functionally Recognized by the Natural Killer-Activating Receptor NKp44

**Auteur(s) :** HO Joanna W; HERSHKOVITZ Oren; PEIRIS Malik; ZILKA Alon; BAR ILAN Ahuva; NAL Beatrice; CHU Kid; KUDELKO Mateusz; YIU WING KAM; ACHDOUT Hagit; MANDELBOIM Michal; ALTMEYER Ralf; MANDELBOIM Ofer; BRUZZONE Roberto; PORGADOR Angel
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**Source :** Journal of virology. 2008; 82 (4) : 2028-2032
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 24 ref.

**Résumé :** Antiviral immune defenses involve natural killer (NK) cells. We previously showed that the NK-activating receptor NKp44 is involved in the functional recognition of H1-type influenza virus strains by NK cells. In the present study, we investigated the interaction of NKp44 and the hemagglutinin of a primary influenza virus H5N1 isolate. Here we show that recombinant NKp44 recognizes H5-expressing cells and specifically interacts with soluble H5 hemagglutinin. H5-pseudotyped lentiviral particles bind to NK cells expressing NKp44. Following interaction with target cells expressing H5, pseudotyped lentiviral particles, or membrane-associated H5, NK cells show NKp44-mediated induced activity. These findings indicate that NKp44-H5 interactions induce functional NK activation.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Influenzavirus; Hemagglutinin; T Lymphocyte; Biological receptor; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus; Hemagglutinine; Lymphocyte T; Recepteur biologique; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723350370
**Origine de la notice :** INIST

*080181047*
**PASCAL**

# A Single-Amino-Acid Substitution in the NS1 Protein Changes the Pathogenicity of H5N1 Avian Influenza Viruses in Mice

**Titre :** A Single-Amino-Acid Substitution in the NS1 Protein Changes the Pathogenicity of H5N1 Avian Influenza Viruses in Mice

**Auteur(s) :** PEIRONG JIAO; GUOBIN TIAN; YANBING LI; GUOHUA DENG; YONGPING JIANG; CHANG LIU; WEILONG LIU; ZHIGAO BU; KAWAOKA Yoshihiro; HUALAN CHEN
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**Source :** Journal of virology. 2008; 82 (3) : 1146-1154
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 36 ref.

**Résumé :** In this study, we explored the molecular basis determining the virulence of H5N1 avian influenza viruses in mammalian hosts by comparing two viruses, A/Duck/Guangxi/12/03 (DK/12) and A/Duck/Guangxi/27/03 (DK/ 27), which are genetically similar but differ in their pathogenicities in mice. To assess the genetic basis for this difference in virulence, we used reverse genetics to generate a series of reassortants and mutants of these two viruses. We found that a single-amino-acid substitution of serine for proline at position 42 (P42S) in the NS1 protein dramatically increased the virulence of the DK/12 virus in mice, whereas the substitution of proline for serine at the same position (S42P) completely attenuated the DK/27 virus. We further demonstrated that the amino acid S42 of NS1 is critical for the H5N1 influenza virus to antagonize host cell interferon induction and for the NS1 protein to prevent the double-stranded RNA-mediated activation of the NF-<kappa>B pathway and the IRF-3 pathway. Our results indicate that the NS1 protein is critical for the pathogenicity of H5N1 influenza viruses in mammalian hosts and that the amino acid S42 of NS1 plays a key role in undermining the antiviral immune response of the host cell.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenzavirus; Mouse; Protein; Pathogenicity; Animal; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus aviaire; Souris; Proteine; Pouvoir pathogene; Animal; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Rodentia; Mammalia; Vertebrata

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723270090
**Origine de la notice :** INIST

*080181045*
**PASCAL**

# Antigenic Profile of Avian H5N1 Viruses in Asia from 2002 to 2007

**Titre :** Antigenic Profile of Avian H5N1 Viruses in Asia from 2002 to 2007

**Auteur(s) :** WAI LAN WU; YIXIN CHEN; PUI WANG; WENJUN SONG; LAU Siu Ying; RAYNER Jane M; SMITH Gavin J D; WEBSTER Robert G; MALIK PEIRIS J S; TIANWEI LIN; NINGSHAO XIA; YI GUAN; HONGLIN CHEN
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**Source :** Journal of virology. 2008; 82 (4) : 1798-1807
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 58 ref.

**Résumé :** Antigenic profiles of post-2002 H5N1 viruses representing major genetic clades and various geographic sources were investigated using a panel of 17 monoclonal antibodies raised from five H5N1 strains. Four antigenic groups from seven clades of H5N1 virus were distinguished and characterized based on their cross-reactivity to the monoclonal antibodies in hemagglutination inhibition and cell-based neutralization assays. Genetic polymorphisms associated with the variation of antigenicity of H5N1 strains were identified and further verified in antigenic analysis with recombinant H5N1 viruses carrying specific mutations in the hemagglutinin protein. Modification of some of these genetic variations produced marked improvement to the immunogenicity and cross-reactivity of H5N1 strains in assays utilizing monoclonal antibodies and ferret antisera raised against clade 1 and 2 H5N1 viruses, suggesting that these sites represent antigenically significant amino acids. These results provide a comprehensive antigenic profile for H5N1 virus strains circulating in recent years and will facilitate the recognition of emerging antigenic variants of H5N1 virus and aid in the selection of vaccine strains.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Aves; Asia; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Vertebrata
**Descripteur(s) français**
*Descripteur(s) :* Aves; Asie; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Vertebrata

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723350160
**Origine de la notice :** INIST

*080180975*
**PASCAL**

# Establishment of Canine RNA Polymerase I-Driven Reverse Genetics for Influenza A Virus : Its Application for H5N1 Vaccine Production

**Titre :** Establishment of Canine RNA Polymerase I-Driven Reverse Genetics for Influenza A Virus : Its Application for H5N1 Vaccine Production

**Auteur(s) :** MURAKAMI Shin; HORIMOTO Taisuke; YAMADA Shinya; KAKUGAWA Satoshi; GOTO Hideo; KAWAOKA Yoshihiro
**Affiliation(s) :** Division of Virology, Department of Microbiology and Immunology, University of Tokyo, Tokyo, Japan; Core Research for Evolutional Science and Technology (CREST), Japan Science and Technology Agency, Saitama, Japan; International Research Center for Infectious Diseases, Institute of Medical Science, University of Tokyo, Tokyo, Japan; Department of Pathobiological Sciences, School of Veterinary Medicine, University of Wisconsin, Madison, Wisconsin, United States

**Source :** Journal of virology. 2008; 82 (3) : 1605-1609
**ISSN :** 0022-538X
**Date de publication :** 2008
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 22 ref.

**Résumé :** In the event of a new influenza pandemic, vaccines whose antigenicities match those of circulating strains must be rapidly produced. Here, we established an alternative reverse genetics system for influenza virus using the canine polymerase I (Poll) promoter sequence that works efficiently in the Madin-Darby canine kidney cell line, a cell line approved for human vaccine production. Using this system, we were able to generate H5N1 vaccine seed viruses more efficiently than can be achieved with the current system that uses the human Poll promoter in African green monkey Vero cells, thus improving pandemic vaccine production.

**Code(s) de classement :** 002A05C10; 002A05C05; 002A05C07

**Descripteur(s) anglais**
*Descripteur(s) :* Dog; Influenza A virus; Animal; Genetics; Vaccine; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Genetics; Virology; Microbiology; Biological sciences; Immunology; Pharmacology; Virology; Microbiology; Biological sciences; Fissipedia; Carnivora; Mammalia; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus; Veterinary
**Descripteur(s) français**
*Descripteur(s) :* Chien; Virus grippal A; Animal; Genetique; Vaccin; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Genetique; Virologie; Microbiologie; Sciences biologiques; Immunologie; Pharmacologie; Virologie; Microbiologie; Sciences biologiques; Fissipedia; Carnivora; Mammalia; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus; Veterinaire

**Localisation :** INIST, Shelf number 13592, INIST No. 354000183723270550
**Origine de la notice :** INIST

*080026571*
**PASCAL**

# Towards health security

**Titre :** Towards health security

**Auteur(s) :** Organisation Mondiale de la Sante OMS Bureau Regional de l' Europe Copenhague, International
**Source :** 2007; 77 p.
**Éditeur :** OMS, Copenhague
**Date de publication :** 2007
**Pays de publication :** International
**Langue(s) :** English
**Type de document :** Book
**Nombre de références :** 45 ref.

**Résumé :** The health security of Europe is increasingly threatened by communicable diseases, natural disasters and large-scale accidents, conflicts, complex emergencies and climate change. Recent health crises such as avian influenza and the threat of a human influenza pandemic, the heat-wave of 2003 and armed conflict in south-eastern Europe have brought these threats into focus. This publication reviews the lessons learned in tackling these threats. Although the health sector takes the lead in health security, health threats are multisectoral so it must also collaborate with and guide the responses of other sectors. As the lead agency of the United Nations health cluster, WHO's function is to promote effective partnerships with others, be they governments, international organizations, civil society or the private sector. Together they can help the Member States of the WHO European Region prepare to prevent and mitigate future health security crises. Targeted at policy-makers, this publication offers guidance on how the international community can apply the lessons learned to future threats, emphasizing the importance of preparing health systems for future challenges

**Code(s) de classement :** 002B30A01

**Descripteur(s) anglais**
*Descripteur(s) :* Europe; Crisis; Accident; Industry; Natural disaster; Epidemic; Epidemiology; Sanitary surveillance; Risk analysis; Risk management
*Desc. génériques :* Public health; Medical sciences
**Descripteur(s) français**
*Descripteur(s) :* Europe; Crise; Accident; Industrie; Cataclysme; Epidemie; Epidemiologie; Surveillance sanitaire; Analyse risque; Gestion risque
*Desc. génériques :* Sante publique; Sciences medicales

**Localisation :** BDSP/ENSP, Shelf number 163679, CA00/0405
**Origine de la notice :** BDSP

*080023466*
**PASCAL**

# Lack of Evidence of Avian-to-Human Transmission of Avian Influenza A (H5N1) Virus among Poultry Workers, Kano, Nigeria, 2006

**Titre :** Lack of Evidence of Avian-to-Human Transmission of Avian Influenza A (H5N1) Virus among Poultry Workers, Kano, Nigeria, 2006

**Auteur(s) :** ORTIZ Justin R; KATZ Mark A; MAHMOUD Mohammed N; AHMED Saidu; BAWA Shehu I; FARNON Eileen C; SARKI Mohammed B; NASIDI Abdussalam; ADO Muhammed S; YAHAYA Abdulrazak H; JOANNIS Tony M; AKPAN Raphael S; VERTEFEUILLE John; ACHENBACH Jenna; BREIMAN Robert F; KATZ Jacqueline M; UYEKI Timothy M; WALI Sadiq S
**Affiliation(s) :** Influenza Division, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, United States; Epidemic Intelligence Service, Office of Workforce and Career Development, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, United States; Kano State Ministry of Health, Nigeria; Federal Ministry of Health, Nigeria; Kano State Ministry of Agriculture, Kano, Nigeria; Division of Vector-Borne Infectious Diseases, CDC, Fort Collins, Colorado, United States; Viral Research Department, National Veterinary Research Institute, Jos, Nigeria; Global AIDS Program Nigeria, CDC, Abuja, Nigeria; International Emerging Infections Program, CDC, Nairobi, Kenya

**Source :** The Journal of infectious diseases. 2007; 196 (11) : 1685-1691
**ISSN :** 0022-1899
**CODEN :** JIDIAQ
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 28 ref.

**Résumé :** Background. In February 2006, poultry outbreaks of highly pathogenic avian influenza A (H5N1) virus were confirmed in Nigeria. A serosurvey was conducted to assess H5N1 transmission among poultry workers and laboratory workers in Nigeria. Methods. From 21 March through 3 April 2006, 295 poultry workers and 25 laboratory workers with suspected exposure to H5N1 virus were administered a questionnaire to assess H5N1 exposures, medical history, and health care utilization. A serum specimen was collected from participants to test for H5N1 neutralizing antibodies by microneutralization assay. Results. The 295 poultry workers reported a median of 14 days of exposure to suspected or confirmed H5N1-infected poultry without antiviral chemoprophylaxis and with minimal personal protective equipment. Among 25 laboratory workers, all handled poultry specimens with suspected H5N1 virus infection. All participants tested negative for H5N1 neutralizing antibodies. Conclusions. Despite widespread exposure to poultry likely infected with H5N1 virus, no serological evidence of H5N1 virus infection was identified among participants. Continued surveillance for H5N1 cases in humans and further seroprevalence investigations are needed to assess the risk of avian-to-human transmission, given that H5N1 viruses continue to circulate and evolve among poultry.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Aves; Human; Avian influenzavirus; Influenza A virus; Transmission; Poultry; Nigeria
*Desc. génériques :* Virology; Microbiology; Biological sciences; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus; Africa; Zoopathogen; Farming animal; Veterinary
**Descripteur(s) français**
*Descripteur(s) :* Aves; Homme; Influenzavirus aviaire; Virus grippal A; Transmission; Volaille; Nigeria
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus; Afrique; Zoopathogene; Animal elevage; Veterinaire

*080023465*
**PASCAL**

# Transmission of the Highly Pathogenic Avian Influenza Virus H5N1 within Flocks during the 2004 Epidemic in Thailand

**Titre :** Transmission of the Highly Pathogenic Avian Influenza Virus H5N1 within Flocks during the 2004 Epidemic in Thailand

**Auteur(s) :** TIENSIN Thanawat; NIELEN Mirjam; VERNOOIJ Hans; SONGSERM Thaweesak; KALPRAVIDH Wantanee; CHOTIPRASATINTARA Sirikan; CHAISINGH Arunee; WONGKASEMJIT Surapong; CHANACHAI Karoon; THANAPONGTHAM Weerapong; SRISUVAN Thinnarat; STEGEMAN Arjan
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**Source :** The Journal of infectious diseases. 2007; 196 (11) : 1679-1684
**ISSN :** 0022-1899
**CODEN :** JIDIAQ
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 39 ref.

**Résumé :** This present study is the first to quantify the transmission of avian influenza virus H5N1 within flocks during the 2004 epidemic in Thailand. It uses the flock-level mortality data to estimate the transmission-rate parameter (<beta>) and the basic reproduction number (R<sub>0). The point estimates of <beta> varied from 2.26/day (95% confidence interval CI, 2.01-2.55) for a 1-day infectious period to 0.66/day (95% CI, 0.50-0.87) for a 4-day infectious period, whereas the accompanying R<sub>0 varied from 2.26 (95% CI, 2.01-2.55) to 2.64 (95% CI, 2.02-3.47). Although the point estimates of <beta> of backyard chickens and fighting cocks raised together were lower than those of laying hens and broiler chickens, this difference was not statistically significant. These results will enable us to assess the control measures in simulation studies. They also indicate that, for the elimination of the virus, a critical proportion of the susceptible poultry population in a flock (i.e., 80% of the population) needs to be vaccinated.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenzavirus; Transmission; Pathogenicity; Epidemic; Thailand
*Desc. génériques :* Virology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Asia; Zoopathogen
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus aviaire; Transmission; Pouvoir pathogene; Epidemie; Thailande
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Asie; Zoopathogene

**Localisation :** INIST, Shelf number 2052, INIST No. 354000173810300140
**Origine de la notice :** INIST

*080021235*
**PASCAL**

# New Pre-pandemic Influenza 7Vaccines : An Egg-and Adjuvant-independent Human Adenoviral Vector Strategy Induces Long-lasting Protective Immune Responses in Mice

**Titre :** New Pre-pandemic Influenza 7Vaccines : An Egg-and Adjuvant-independent Human Adenoviral Vector Strategy Induces Long-lasting Protective Immune Responses in Mice

**Auteur(s) :** HOELSCHER M A; JAYASHANKAR L; GARG S; VEGUILLA V; LU X; SINGH N; KATZ J M; MITTAL S K; SAMBHARA S
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**Source :** Clinical pharmacology and therapeutics. 2007; 82 (6) : 665-671
**ISSN :** 0009-9236
**CODEN :** CLPTAT
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 58 ref.

**Résumé :** Highly pathogenic avian H5N1 influenza viruses that are currently circulating in southeast Asia may acquire the potential to cause the next influenza pandemic. A number of alternate approaches are being pursued to generate cross-protective, dose-sparing, safe, and effective vaccines, as traditional vaccine approaches, i.e., embryonated egg-grown, are not immunogenic. We developed a replication-incompetent adenoviral vector-based, adjuvant- and egg-independent pandemic influenza vaccine strategy as a potential alternative to conventional egg-derived vaccines. In this paper, we address suboptimal dose and longevity of vaccine-induced protective immunity and demonstrate that a vaccine dose as little as 1 x 10<sup>6 plaque-forming unit (PFU) is sufficient to induce protective immune responses against a highly pathogenic H5N1 virus. Furthermore, the vaccine-induced humoral and cellular immune responses and protective immunity persisted at least for a year.

**Code(s) de classement :** 002B02; 002B05C02C

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza; Egg; Immunological adjuvant; Human; Gene therapy; Adenoviridae; Vector; Long lasting; Immunoprotection; Animal; Mouse
*Desc. génériques :* Pharmacology; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection; Virus; Rodentia; Mammalia; Vertebrata
**Descripteur(s) français**
*Descripteur(s) :* Grippe; Oeuf; Adjuvant immunologique; Homme; Therapie genique; Adenoviridae; Vecteur; Longue duree; Immunoprotection; Animal; Souris; Pandemie
*Desc. génériques :* Pharmacologie; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection; Virus; Rodentia; Mammalia; Vertebrata

**Localisation :** INIST, Shelf number 1144, INIST No. 354000173832260070
**Origine de la notice :** INIST

*080021231*
**PASCAL**

# The Importance of Including Swine and Poultry Workers in Influenza Vaccination Programs

**Titre :** The Importance of Including Swine and Poultry Workers in Influenza Vaccination Programs

**Auteur(s) :** GRAY G C; BAKER W S
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**Source :** Clinical pharmacology and therapeutics. 2007; 82 (6) : 638-641
**ISSN :** 0009-9236
**CODEN :** CLPTAT
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 22 ref.

**Résumé :** Sensing the threat of an influenza pandemic, many countries are developing influenza pandemic prevention and control strategies. Such plans often focus efforts on detecting outbreaks and protecting leaders, health-care workers, and outbreak responders. Considering recent research, we argue that prevention plans should also include swine and poultry workers. Ignoring these workers could result in an increased probability of generating novel viruses, as well as the acceleration of a pandemic's morbidity and mortality.

**Code(s) de classement :** 002B02; 002B05C02C

**Descripteur(s) anglais**
*Descripteur(s) :* Pig; Swine; Poultry; Occupational exposure; Worker; Influenza; Vaccination; Immunoprophylaxis; Prevention; Program; Human
*Desc. génériques :* Pharmacology; Medical sciences; Virology; Infectious diseases; Medical sciences; Artiodactyla; Ungulata; Mammalia; Vertebrata; Viral disease; Infection; Veterinary
**Descripteur(s) français**
*Descripteur(s) :* Porc; Porcin; Volaille; Exposition professionnelle; Travailleur; Grippe; Vaccination; Immunoprophylaxie; Prevention; Programme; Homme
*Desc. génériques :* Pharmacologie; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Artiodactyla; Ungulata; Mammalia; Vertebrata; Virose; Infection; Veterinaire

**Localisation :** INIST, Shelf number 1144, INIST No. 354000173832260030
**Origine de la notice :** INIST

*080021230*
**PASCAL**

# Pandemic Influenza Vaccine : The US Government Is Not Doing Enough

**Titre :** Pandemic Influenza Vaccine : The US Government Is Not Doing Enough

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**Source :** Clinical pharmacology and therapeutics. 2007; 82 (6) : 635-637
**ISSN :** 0009-9236
**CODEN :** CLPTAT
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 5 ref.

**Code(s) de classement :** 002B02; 002B05C02C

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza; Vaccine; Prevention; Immunoprophylaxis; Human
*Desc. génériques :* Pharmacology; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
**Descripteur(s) français**
*Descripteur(s) :* Grippe; Vaccin; Prevention; Immunoprophylaxie; Homme; Pandemie
*Desc. génériques :* Pharmacologie; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection

**Localisation :** INIST, Shelf number 1144, INIST No. 354000173832260020
**Origine de la notice :** INIST

*080021229*
**PASCAL**

# Pandemic Flu Vaccine : Are We Doing Enough?

**Titre :** Pandemic Flu Vaccine : Are We Doing Enough?

**Auteur(s) :** CAMPBELL J D
**Affiliation(s) :** University of Maryland School of Medicine, Center for Vaccine Development, Baltimore, Maryland, United States

**Source :** Clinical pharmacology and therapeutics. 2007; 82 (6) : 633-635
**ISSN :** 0009-9236
**CODEN :** CLPTAT
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 21 ref.

**Résumé :** Influenza experts have been trying for a long time to convince other scientists, the public health community, and the general population that preparations for a pandemic should be a priority. But it was not until the highly pathogenic H5N1 avian strain emerged, causing a great epizootic and infecting and killing people exposed to infected birds, that research on this topic exploded. Below I discuss some truly phenomenal advances that have emerged from this newfound interest in pandemic influenza, to show that, yes, we are doing enough.

**Code(s) de classement :** 002B02; 002B05C02C

**Descripteur(s) anglais**
*Descripteur(s) :* Influenza; Vaccine; Prevention; Immunoprophylaxis; Human
*Desc. génériques :* Pharmacology; Medical sciences; Virology; Infectious diseases; Medical sciences; Viral disease; Infection
**Descripteur(s) français**
*Descripteur(s) :* Grippe; Vaccin; Prevention; Immunoprophylaxie; Homme; Pandemie
*Desc. génériques :* Pharmacologie; Sciences medicales; Virologie; Maladies infectieuses; Sciences medicales; Virose; Infection

**Localisation :** INIST, Shelf number 1144, INIST No. 354000173832260010
**Origine de la notice :** INIST

*080019437*
**PASCAL**

# Disifin (Sodium tosylchloramide) and Toll-like receptors (TLRS) : evolving importance in health and diseases

**Titre :** Disifin (Sodium tosylchloramide) and Toll-like receptors (TLRS) : evolving importance in health and diseases

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**Source :** Journal of industrial microbiology and biotechnology. 2007; 34 (12) : 751-762
**ISSN :** 1367-5435
**Date de publication :** 2007
**Pays de publication :** United Kingdom
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 107 ref.

**Résumé :** Disifin has emerged as a unique and very effective agent used in disinfection of wounds, disinfection of surfaces, materials and water, and other substances contaminated with almost every type of pathogenic microorganism ranging from viruses, bacteria, fungi and yeast, and, very possibly, protozoan parasites, as well. The major active component of Disifin is tosylchloramide sodium (chloramine T). However, the mechanism by which Disifin suppresses the activities of pathogenic microbial agents remains enigmatic. The molecular mechanisms, and the receptors and the signal transducing pathways responsible for the biological effects of Disifin are largely unknown. Despite considerable advances, enormous investigative efforts and large resources invested in the research on infectious diseases, microbial infection still remains a public health problem in many parts of the world. The exact nature of the pathogenic agents responsible for many infectious diseases, and the nature of the receptors mediating the associated inflammatory events are incompletely understood. Recent advances in understanding the molecular basis for mammalian host immune responses to microbial invasion suggest that the first line of defense against microbes is the recognition of pathogen-associated molecular patterns (PAMPs) by a family of transmembrane pattern-recognizing and signal transducing receptor proteins called Toll-like receptors (TLRs). The TLR family plays an instructive role in innate immune responses against microbial pathogens, as well as the subsequent induction of adaptive immune responses. TLRs mediate recognition and inflammatory responses to a wide range of microbial products and are crucial for effective host defense by eradication of the invading pathogens. Now, recent updates demonstrated the ability of Disifin-derived products, Disifin-Animal and Disifin-Pressant to effectively suppress the progression and activities of Chikungunya fever and that of avian influenza A virus A/cardialis/Germany/72, H7N1: the agent of a highly pathogenic avian influenza (HPAI) infection, respectively. Overall, the above findings led me to suggest that Disifin and TLRs may mechanistically overlap in the processes of executing their functions against pathogenic microbial organisms. Thus, elucidating and better understanding of the molecular underpinnings responsible for the biochemical effects of Disifin-products, and the nature and mode of the interaction(s) of Disifin with TLRs in the process of exerting their biological effects may open a novel dimension in the research of infectious diseases, which may provide novel therapeutic targets for the prevention and treatment of a wide range of infectious diseases.

**Code(s) de classement :** 002A31; 215

**Descripteur(s) anglais**
*Descripteur(s) :* Sodium; Health; Disease; Pathogenic; Microorganism; Organism; Signal transduction; toll like receptor
*Desc. génériques :* Biotechnology; Biological sciences
**Descripteur(s) français**
*Descripteur(s) :* Sodium; Sante; Maladie; Pathogene; Microorganisme; Organisme; Transduction signal; Recepteur type toll
*Desc. génériques :* Biotechnologie; Sciences biologiques

*080019248*
**PASCAL**

# The cleavage of the hemagglutinin protein of H5N2 avian influenza virus in yeast

**Titre :** The cleavage of the hemagglutinin protein of H5N2 avian influenza virus in yeast

**Auteur(s) :** WANG Chi Y; LUO Yu L; CHEN Yu T; LI Shu K; LIN Chi H; HSIEH Yao C; LIU Hung J
**Affiliation(s) :** Department of Life Science, National Pingtung University of Science and Technology, Neipu, Pingtung 912, Taiwan; Department of Veterinary Medicine, National Pingtung University of Science and Technology, Neipu, Pingtung 912, Taiwan; Graduate Institute of Biotechnology, National Pingtung University of Science and Technology, Neipu, Pingtung 912, Taiwan; Tainan Hsieh Livestock Disease Control Center, Tainan County, Taiwan

**Source :** Journal of virological methods. 2007; 146 (1-2) : 293-297
**ISSN :** 0166-0934
**CODEN :** JVMEDH
**Date de publication :** 2007
**Pays de publication :** Netherlands
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 1 p.1/4

**Résumé :** Influenza viruses belonging to the Orthomyxoviridae family are enveloped viruses with segmented negative sense RNA genome surrounded by a helical symmetry shell. Influenza viruses, especially the highly pathogenic avian influenza virus (HPAI) such as H5 or H7 subtype are important pathogens for the poultry industry. Due to genetic reassortments between avian and human influenza viruses, global pandemics may emerge and the naive human immunity could not be ready for them. The full-length HA-encoding gene of H5N2 AIV was inserted into a secretory pPICZaA vector and integrated into the genome of Pichia pastoris by heterologous recombination. The HA protein secretion into the medium was induced with methanol. Besides the expected 69 kDa protein, another smaller fragment about 47 kDa was recognized by an anti-AIV-HA monoclonal antibody in Western blot assay. This is the first report on the cleavage of HA<sub>0 into HA and HA<sub>2 in the methylotrophic yeast P. pastoris. This possibly was due to digestion by proteases from P. pastoris based on the amino acid sequences at the predicted cleavage site, <sup>3<sup>2<sup>6R-X-K-R<sup>3<sup>2<sup>9. With similar modifications to the eukaryotes, large quantity, proper antigenicity, and low cost, this expression system may provide a simple tool to produce HA proteins for further use in preparation of ELISA kits and subunit vaccines.

**Code(s) de classement :** 002A05C09; 002A05D07

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenzavirus; Yeast; Pichia pastoris; Hemagglutinin; Protein; Methylotrophy; Microbiology; Method; Virology
*Desc. génériques :* Virology; Microbiology; Biological sciences; Mycology; Microbiology; Biological sciences; Influenzavirus A; Orthomyxoviridae; Virus; Ascomycota; Fungi
**Descripteur(s) français**
*Descripteur(s) :* Influenzavirus aviaire; Levure; Pichia pastoris; Hemagglutinine; Proteine; Methylotrophie; Microbiologie; Methode; Virologie
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Mycologie; Microbiologie; Sciences biologiques; Influenzavirus A; Orthomyxoviridae; Virus; Ascomycota; Fungi

**Localisation :** INIST, Shelf number 18295, INIST No. 354000174249880380
**Origine de la notice :** INIST

*080017602*
**PASCAL**

# Differences in public emotions, interest, sense of knowledge and compliance between the affected area and the nationwide general population during the first phase of a bird flu outbreak in Israel

**Titre :** Differences in public emotions, interest, sense of knowledge and compliance between the affected area and the nationwide general population during the first phase of a bird flu outbreak in Israel

**Auteur(s) :** PELTZ Rami; AVISAR SHOHAT Galit; BAR DAYAN Yaron
**Affiliation(s) :** IDF Home Front Command, Israel; Faculty of Health Sciences, Ben Gurion University, Beer-Sheva, Israel

**Source :** The Journal of infection. 2007; 55 (6) : 545-550
**ISSN :** 0163-4453
**CODEN :** JINFD2
**Date de publication :** 2007
**Pays de publication :** United Kingdom
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 16 ref.

**Résumé :** Objective: In March 2006, 298,000 cases of birds infected with bird flu were destroyed in nine rural settlements in Israel, out of around 1.2 million birds that were destroyed within these settlements and in a radius of 3 km. The nationwide population was instructed to take preventive measures against the spread of infection. This study aims to compare the emotions, interest, sense of knowledge and compliance, of the population in the affected area with the nationwide general population, during the first phase of a bird flu outbreak in Israel. Methods: We conducted a telephone survey among two randomly selected, representative samples of adults. One sample involved 500 adult residents of the nationwide area; and the other sample involved 103 adult residents of the affected area during the first phase of the outbreak. We measured perceived emotions, interest, sense of knowledge and compliance. We analyzed the differences in these parameters between the affected area and the nationwide population using chi-square and t-test analysis. A p value of less than 0.05 was considered to be statistically significant. Results: The compliance for using measures of precaution was high and not significantly different between the affected area and the nationwide population. The interest in bird flue and the sense of knowledge were significantly higher in the affected area compared to the nationwide population ($p < 0.05$). A misconception of a high human to human transmission was significantly higher in the nationwide population compared with the affected area ($p < 0.05$). The levels of stress and fear perception were significantly lower in the affected area compared to the nationwide population ($p < 0.05$). Conclusion: Interest, sense of knowledge and emotions of the population are different in the affected area during the early phase of bird flu outbreak compared with the general population in the same country. Authorities must consider these differences while planning the strategy of population education during the early phase of a bird flu outbreak.

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

**Descripteur(s) anglais**
*Descripteur(s) :* Avian influenza; Emotion emotionality; Interest; Knowledge; Compliance; Epidemic; Israel; Marches; Radius; Stress
*Desc. génériques :* Virology; Infectious diseases; Medical sciences; Medical sciences; Viral disease; Infection; Asia; Italy; Europe
**Descripteur(s) français**
*Descripteur(s) :* Grippe aviaire; Emotion emotivite; Interet; Connaissance; Observance; Epidemie; Israel; Marches; Radius; Stress
*Desc. génériques :* Virologie; Maladies infectieuses; Sciences medicales; Sciences medicales; Virose; Infection; Asie; Italie; Europe

*080016960*
**PASCAL**

# Detection of avian influenza virus using an interferometric biosensor

**Titre :** Detection of avian influenza virus using an interferometric biosensor

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**Source :** Analytical and bioanalytical chemistry. 2007; 389 (4) : 1193-1199
**ISSN :** 1618-2642
**Date de publication :** 2007
**Pays de publication :** Germany
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 37 ref.

**Résumé :** An interferometric biosensor immunoassay for direct and label-less detection of avian influenza through whole virus capture on a planar optical waveguide is described. The assay response is based on index of refraction changes that occur upon binding of virus particles to unique antigen-specific (hemagglutinin) antibodies on the waveguide surface. Three virus subtypes (two H7 and one H8) in buffer solution were tested using both monoclonal and polyclonal capture antibodies. The real-time response of the antigen-antibody interaction was measured and was shown to be concentration-dependent, with detection limits as low as 0.0005 hemagglutination units per milliliter. A simple sandwich assay was shown to further increase the biosensor response.

**Code(s) de classement :** 001C04G; 002A31C09B; 001C04A; 215

**Descripteur(s) anglais**
*Descripteur(s) :* Biosensor; Immunological method; Optical waveguide; Chemical analysis; Waveguide; Buffer solution; Real time; Detection limit; Interferometer; Chemical sensor; Antibody
*Desc. génériques :* Analytical chemistry; Chemistry; Biotechnology; Biological sciences; Analytical chemistry; Chemistry
**Descripteur(s) français**
*Descripteur(s) :* Biodetecteur; Methode immunologique; Guide onde optique; Analyse chimique; Guide onde; Solution tampon; Temps reel; Limite detection; Interferometre; Capteur chimique; Anticorps
*Desc. génériques :* Chimie analytique; Chimie; Biotechnologie; Sciences biologiques; Chimie analytique; Chimie

**Localisation :** INIST, Shelf number 853, INIST No. 354000143472240190
**Origine de la notice :** INIST

*080013614*
**PASCAL**

# DAS181, A novel sialidase fusion protein, protects mice from lethal avian influenza H5N1 virus infection

**Titre :** DAS181, A novel sialidase fusion protein, protects mice from lethal avian influenza H5N1 virus infection

**Auteur(s) :** BELSER Jessica A; XIUHUA LU; SZRETTER Kristy J; XIAOPING JIN; ASCHENBRENNER Laura M; LEE Alice; HAWLEY Stephen; DO HYONG KIM; MALAKHOV Michael P; MANG YU; FANG FANG; KATZ Jacqueline M
**Affiliation(s) :** Influenza Division, National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, United States; Emory University, Atlanta, Georgia, United States; NexBio, Inc, San Diego, California, United States

**Source :** The Journal of infectious diseases. 2007; 196 (10) : 1493-1499
**ISSN :** 0022-1899
**CODEN :** JIDIAQ
**Date de publication :** 2007
**Pays de publication :** United States
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 25 ref.

**Résumé :** Increasing resistance to currently available influenza antivirals highlights the need to develop alternate approaches for the prevention and/or treatment of influenza. DAS181 (Fludase), a novelsialidase fusion protein that enzymatically removes sialic acids on respiratory epithelium, exhibits potent antiviral activity against influenza A and B viruses. Here, we use a mouse model to evaluate the efficacy of DAS181 treatment against a highly pathogenic avian influenza H5N 1 virus. When used to treat mice daily beginning 1 day before infection with A/Vietnam/ 1203/2004(H5N1) virus, DAS181 treatment at 1 mg/kg/day protected 100% of mice from fatal disease, prevented viral dissemination to the brain, and effectively blocked infection in 70% of mice. DAS 181 at 1 mg/kg/day was also effective therapeutically, conferring enhanced survival of H5N1 virus-challenged mice when treatment was begun 72 h after infection. This notable antiviral activity underscores the potential utility ofDAS181 as a new class of drug that is effective against influenza viruses with pandemic potential.

**Code(s) de classement :** 002A05C10

**Descripteur(s) anglais**
*Descripteur(s) :* Mouse; Avian influenzavirus; Exo <alpha> sialidase; Fusion protein
*Desc. génériques :* Virology; Microbiology; Biological sciences; Rodentia; Mammalia; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus; Glycosidases; Glycosylases; Hydrolases; Enzyme; Zoopathogen
**Descripteur(s) français**
*Descripteur(s) :* Souris; Influenzavirus aviaire; Exo <alpha> sialidase; Proteine fusion
*Desc. génériques :* Virologie; Microbiologie; Sciences biologiques; Rodentia; Mammalia; Vertebrata; Influenzavirus A; Orthomyxoviridae; Virus; Glycosidases; Glycosylases; Hydrolases; Enzyme; Zoopathogene

**Localisation :** INIST, Shelf number 2052, INIST No. 354000174214060090
**Origine de la notice :** INIST

*080008453*
**PASCAL**

# M2 protein : A proton channel of influenza A virus : Ion channels as a target for drug desing

**Titre :** M2 protein : A proton channel of influenza A virus : Ion channels as a target for drug desing

**Auteur(s) :** BETAKOVA Tatiana
**Affiliation(s) :** Institute of Virology, Dubravska cesta 9, 845 05 Bratislava, Slovakia

**Source :** Current pharmaceutical design. 2007; 13 (31) : 3231-3235
**ISSN :** 1381-6128
**Date de publication :** 2007
**Pays de publication :** Netherlands
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 74 ref.

**Résumé :** Recent outbreaks of highly pathogenic avian influenza A virus infections (H5 and H7 subtypes) in poultry and humans have raised concerns that a new influenza pandemic will occur in near future. Currently, four antivirals have proven efficacy in the treatment and prophylaxis of influenza A infections: two M2 inhibitors (amantadine and rimantadine) and two neuraminidase inhibitors (zanamivir and oseltamivir). Early treatment with antivirals reduces the duration of symptoms and the time to recovery by one to two days. However, when antivirals are used for the treatment the antiviral resistance develops rapidly, limiting their use. There is an urgent need for research on newer antiviral agents and "universal" vaccine against influenza virus. The M2 protein from the influenza A virus forms a proton channel in the virion and is essential for infection. As a relatively conserved protein, the M2 protein seems to be a suitable candidate for development of a new generation of vaccine or antiviral agents. This review describes the role of the M2 ion channel in virus replication and the structure-function relationship of the channel.

**Code(s) de classement :** 002B02S05

**Descripteur(s) anglais**
*Descripteur(s) :* Membrane protein; Ionic channel; Influenza A virus; Antiviral; Review; Structure function relationship; M protein
*Desc. génériques :* Virology; Infectious diseases; Pharmacology; Medical sciences; Influenzavirus A; Orthomyxoviridae; Virus
**Descripteur(s) français**
*Descripteur(s) :* Proteine membranaire; Canal ionique; Virus grippal A; Antiviral; Article synthese; Relation structure fonction; Proteine M2; Proteine M
*Desc. génériques :* Virologie; Maladies infectieuses; Pharmacologie; Sciences medicales; Influenzavirus A; Orthomyxoviridae; Virus

**Localisation :** INIST, Shelf number 26320, INIST No. 354000174226770070
**Origine de la notice :** INIST

*080002455*
**PASCAL**

# Developments in influenza vaccination coverage in England, Scotland and Wales covering five consecutive seasons from 2001 to 2006

**Titre :** Developments in influenza vaccination coverage in England, Scotland and Wales covering five consecutive seasons from 2001 to 2006

**Auteur(s) :** HOLM Majbrit V; BLANK Patricia R; SZUCS Thomas D
**Affiliation(s) :** European Center of Pharmaceutical Medicine, University of Basel, 4031 Basel, Switzerland; Institute of Social and Preventive Medicine, University of Zurich, Hirschengraben 84, 8001 Zurich, Switzerland

**Source :** Vaccine . 2007; 25 (46) : 7931-7938
**ISSN :** 0264-410X
**CODEN :** VACCDE
**Date de publication :** 2007
**Pays de publication :** United Kingdom
**Langue(s) :** English
**Type de document :** Serial
**Nombre de références :** 16 ref.

**Résumé :** This study aims at assessing trends in influenza vaccination coverage from 2001 to 2006 in Great Britain, at understanding drivers and barriers to vaccination and at identifying vaccination intentions for influenza season 2006/2007. In seasons 2001/2002 to 2005/2006, telephone-based household surveys representative of the population from age 16 were conducted, with about 2000 interviews per season (10,095 in total). Overall influenza vaccination coverage rate in Great Britain reached 25.9% in season 2005/2006. A sub-analysis showed that the highest coverage was reported in Wales reaching 33.3%. In the elderly recommended vaccination (from age 65), the coverage reached 79% in 2005/2006. Advice from the family doctor and the perception that influenza is a serious illness were the most frequent reasons for getting vaccinated. The most frequent reasons for not getting vaccinated, in persons never vaccinated before, were that they had not considered immunisation or had not received a recommendation from their family doctor. Those vaccinated in the past but not in the current season said they had not thought about vaccination/forgot. A gap continues to exist between those with intention to get vaccinated and those actually vaccinated, indicating a potential to increase vaccination coverage rate in the future. Our study shows that stable vaccination coverage rates were observed from 2002 to 2006 in Great Britain. The coverage had increased in Wales and in Scotland. The coverage among the elderly above 65 years was the highest in Europe. Although Great Britain complies with national and international goals of vaccination coverage rates effort is needed to ensure high vaccination coverage rates at the same level in the future.

**Code(s) de classement :** 002A05F04

**Descripteur(s) anglais**
*Descripteur(s) :* Vaccination coverage; England; Scotland; Wales; Vaccination; Immunization; Vaccine; Uptake; Avian influenza
*Desc. génériques :* Immunology; Pharmacology; Applied microbiology; Microbiology; Biological sciences; Great Britain; United Kingdom; Europe; Infection; Viral disease
**Descripteur(s) français**
*Descripteur(s) :* Couverture vaccinale; Angleterre; Ecosse; Pays de Galles; Vaccination; Immunisation; Vaccin; Captation; Grippe aviaire
*Desc. génériques :* Immunologie; Pharmacologie; Microbiologie appliquee; Microbiologie; Sciences biologiques; Grande Bretagne; Royaume Uni; Europe; Infection; Virose

**Localisation :** INIST, Shelf number 20289, INIST No. 354000162097370080
**Origine de la notice :** INIST