# TRACKING THE BIRD FLU

Since the first appearance in 1997 in Hong Kong, where the so-called bird flu had infected eighteen people, killing six of them, the feared prediction of a global influenza pandemic did not at that time materialize. Even though it did ravage poultry farms throughout Asia, killing millions of chickens and ducks, this deadly virus appeared to have then gone to ground. The exceedingly rare direct jump of a H5N1 virus from fowl to humans appeared to be a possible one-time fluke. However, this apparent disappearance did not fool the world's influenza virologists for one moment. They well knew that this artful viral shape-shifter was secretly mutating, making copies of itself and quietly expanding its domain. The only real question was, not if, but when and where it would reappear.

There have been three great influenza pandemics in the past century; the Hong Kong flu of 1968, which killed 750,000 worldwide, the Asian flu of 1957, with a death toll of one million worldwide, and the most famous, and by far the worst, the Spanish flu of 1918, which took the lives of an estimated 50 to100 million people world wide. This infamous viral strain has been the subject of research and speculation for the past 88 years, and is believed, like the current H5N1 strain, to have been a lethal mutant avian virus that jumped directly from birds to humans.

It is well understood that viruses constantly mutate. The scary thing is the distinct possibility that in the almost six years since its first appearance, this deadly *avian* virus may have managed to acquire some *mammalian* influenza genetic material, which would make it more easily transmissible among humans. How does this happen? When two different flu viruses infect an animal or human at the same time, they can swap genetic material and create a brand new virus – a virus that no one has any or very little immunity against. This is what is believed to have possibly happened in the three great influenza pandemics of the 20$^{th}$ century.

In the case of the Bird Flu, this is a virus, which prior to 1997 was known primarily to infect fowl – chickens, duck, geese, etc. Certain mammals, such as pigs, are also susceptible to infection from avian viruses. These two avian/mammal strains may swap enough genetic material to create a viral strain capable of infecting humans – but it normally takes the middle step of bird to pig before it can pass on to the human host. However, in 1997, a rare – indeed, unheard of – transmission of a deadly avian flu virus occurred, which apparently skipped the intermediate pig step, and jumped directly to 18 humans, killing 6 of them. "These events established that avian influenza viruses can infect humans without passage through an intermediate host and without acquiring gene segments from human influenza viruses," say virology experts.

Since 1997, there have been a number of other H5N1 human cases. In 1999, two children in Hong Kong died from the disease. From the year 2001 to 2005, close to sixty people across Asia fell victim to this mutant virus acquired directly from infected birds. There have been a few suspected cases of resultant human-to-human transmission, but the process has as yet, gone no further. Concern is progressively rising that the next deadly influenza pandemic could be triggered if someone happens to catch the H5N1 bird flu strain and a common human flu strain at the same time. This mutant strain would have the potential of accumulating enough genetic changes to become very capable of passing quickly and easily from human to human instead of from bird to human. This could create a super bug to end all super bugs, a potent viral hybrid which could combine the deadliness of the bird strain and the contagious capability of a common human strain. Furthermore, no humans have any immunity whatsoever to such a virus, and conventional flu vaccines are not believed to provide the least protection against it. Scientists estimate that such a global pandemic could kill more than seven million people worldwide within the first few months following the outbreak. Although scientists are working around the clock to develop a vaccine, Dr. Julie Gerberding of the CDC said, "We're all holding our breath."

The following is a year-by-year record, beginning with the first re-appearance in 1999 of the H5N1 bird flu, from its origin in 1997 up to the year 2005. In order to fully appreciate the predicted impact that this virus may have in the future, it is recommended that the reader review pages 81 through 103 of Part I of this book before continuing.

## 1999

In Hong Kong, the death of two children from H5N1 influenza thought to be from a possible human-to-human transmission.

## 2002

As of September 2002, The World Health Organization (WHO) reported that more than 700 people in the Indian Ocean island of Madagascar had died of two deadly, highly virulent strains of both type A and B influenza. Health officials said this flu, called "rapo-rapo" by the island residents, had sickened over 22,000 people in a matter of only a few weeks, 95 percent of which were from impoverished rural communities.

## 2003

Influenza A (H5N1) killed thousands of chickens in South Korea, where an outbreak in December 2003, resulted in the slaughter of a million and a half chickens and ducks in a desperate attempt to contain the disease. Japan reported 6,000 chickens had died from the bird flu and promised thousands of others would be preventively destroyed. Hong Kong reported two cases, and in the Netherlands, some poultry workers, their families, and a veterinarian reported cases with one death. A total of 86 cases in Asia and two deaths were reported in the year 2003.

## 2004

In January 2004, officials in Vietnam admitted that nearly 900,000 chickens possibly exposed to the deadly bird flu virus had been sold to the public. Officials from the Vietnam Ministry of Health reported that five people in that country had died from confirmed cases of the virulent virus, and tests were being conducted to determine if the deaths of nine other children in Hanoi were linked to the disease.

Fears that the disease may have spread to nearby Thailand, a major Asian chicken exporter, resulted in a governmental order to slaughter thousands of suspected fowl, while three people in that country were being tested for the avian virus. Thailand had repeatedly insisted it was free of the bird flu, that what they were experiencing was merely "bird cholera," yet the World Health Organization reported the first confirmed case and fatality of a six year-old Thai boy who died of the disease late Sunday, January 25, 2004. Eventually, the Thai government's chief spokesman admitted that his government had known for a few weeks that its chickens were dying of avian flu, but that the outbreak had been kept from the public to avoid panic. Such a maneuver also allowed Thailand's politically powerful chicken industry, which is one of the world's largest, to continue exporting until the situation reached irrefutable status. Chicken is the number two preferred meat source, right behind pork for China's 1.3 billion people, and Japan buys almost half of Thailand's exported chickens, with a third going to the European Union.

Mainland China, which shares one border with Vietnam, also denied having any cases and promised stepped-up vigilance to protect its borders. Despite this denial, international health experts and jittery governmental officials, including those from Hong Kong, Thailand, South Korea, Taiwan, Japan, and Cambodia, while dealing with outbreaks among their own chicken population, banned all poultry imports from countries already affected by any evidence of the disease.

vaccines and what can we expect in the way of protection from them should we face massive invasion of an unknown virus?

## FLU VACCINES

For over five decades billions of people in almost every country of the world have rolled up their sleeves in order to be injected with the latest seasonal flu vaccine, in spite of the fact that studies have shown that flu vaccines are, in general, effective only about 52 percent of the time. Flu vaccine manufacturing is, at best, an "iffy" and complicating affair. Even before a current flu season has ended, sometime in January and up through May, an FDA advisory panel, in cooperation with the CDC, has the task of choosing three viral strains it believes will be the dominant active strains making up the *coming* flu season. The CDC then provides the FDA with these three new "seed" viruses, which the FDA distributes to vaccine manufactures.

These new seed viruses are injected into eleven-day-old fertilized chicken eggs and incubated, which multiplies the viruses in the egg whites. Thousands and thousands of these tiny incubators produce live flu viruses that are then chemically inactivated. During the months of June and July the FDA conducts tests on these newly harvested viruses to determine purity, potency, and yield of virus strains. The three approved strains are blended into a single vaccine by the manufacturer, and the FDA then licenses the vaccine for distribution. During the month of August, the vaccine is bottled in liquid vials and packaged in cold storage to ensure potency. Starting in the month of September, the vials are shipped to medical facilities throughout the world to begin the yearly influenza vaccine campaign.

This entire process can take the better part of a year, and often the most active flu strain can be missed completely and therefore, left out of that particular year's vaccine. Another, not well known fact is that occasionally a predicted nasty strain refuses to grow during the incubation process, and is simply substituted by another more compliant strain as a compromise. At best, in any given normal year, the flu vaccine is only between 70 to 90 percent effective.

Ever since the 2004-2005 flu manufacturing fiasco, when England's Chiron Corp., the United State's main flu vaccine supplier, was left holding 48 million shots that they couldn't sell, due to "unspecified manufacturing problems," health officials have been exploring other flu vaccine technology sources.

One idea that is gaining more and more attention is that instead of the "antiquated system too inflexible and time-consuming to respond to pandemics, or vaccine shortages" such as in the 2004-2005 influenza season, both national and international biotech companies have been doing research to develop "cell-based" flu vaccines. They are working with various processes that grow flu vaccine in cells extracted from caterpillar ovaries, African green monkeys, dogs, and even human fetal retinas. "This really is the wave of the future," according to Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health, who as a strong proponent of these options, has petitioned Congress for funds to jump-start more cell culture vaccine research.

The practice of manufacturing vaccines from cell cultures is certainly not new. This method has for some time been used to produce polio vaccines from monkey kidney cells, the same cell line source, by the way, that was used to replenish the supply of smallpox vaccines in the United States, and the method now proposed for producing future flu vaccines. This method, according to Samuel L. Katz, a member of the vaccine advisory committee for the U.S. Food and Drug Administration, would be "moving flu vaccine production into the 20th century at the beginning of the 21st." For a detailed discussion of this cell culture practice – especially in the use of African green monkeys, please refer back to the section in Part I – W*hat Has Allowed The Cross-Species Jump?*

According to an Associated Press release, as of February 2005, the first doses of an experimental flu vaccine were being shipped to the National Institute for Allergy and Infectious Diseases to begin clinical trials. "Antiviral drugs are being stockpiled, and two million doses of vaccine are being stored in bulk form for possible emergency use and to test whether they maintain their potency." Baxter International Inc. of Deerfield, IL, has built a cell-culture manufacturing factory in the Czech Republic, and plans to sell its flu vaccine, called PrefluCel, in Europe in 2006, and hopefully in the United States in 2008. Protein Sciences, a privately owned company, hopes to have FDA approval for its vaccine, FluBlok by 2007. Australian scientists announced in the summer of 2004, that they "might soon" have a viable vaccine. Commonwealth Scientific and Industrial Research Organization in that country have reportedly developed a vaccine that delivers a part of the H5N1's genetic material.

From the bird flu's initial appearance in 1997, the world's virology scientists have been feverously working to develop an effective vaccine in time for what they are sure will be the "next big flu pandemic." They have also been grateful that the annual influenza seasons following 1997 were relatively mild, as flu seasons go. The feared bird flu itself appeared to be sleeping. Then came the year 2004, with the Asian list of countries reporting

confirmed cases and fatalities in the deadliest outbreak of the disease since 1997. This news, along with statements from The World Health Organization, indicating that the search for a vaccine had suffered a setback, caused great concern among officials. This was due to the fact that, over that preceding seven years, the bird flu virus had mutated and could no longer be used as the key to producing a vaccine. Even though no bird flu vaccine was anywhere near ready, the obvious re-emergence of the virus prompted the most intense campaign for influenza vaccination since the infamous 1976 "Swine Flu" fiasco.

The optimal time for people to be vaccinated in the United States is during the month of October, or at least November, before the flu season begins to peak in December. In addition to an effective television blitz, releases in the nation's daily newspapers carried warnings against failing to get the 2004/2005 flu shot. The disturbing news of a vaccine shortage caused a virtual stampede to get the vaccine. People who had previously neglected getting a yearly flu shot, now suddenly had to have one.

The following are excerpts from predominantly associated press news releases in the month of October 2004. Please note the almost daily progression of intensity. The bold print indicates the news article's headline.

**October 2, 2004 - Vaccine program targets very young** – New national guidelines are now in effect for flu vaccines for children 6 to 23 months old. Until this year, there was no official national recommendation to vaccinate infants and toddlers against flu according to Tammy Santibanez, CDC's epidemiologist. "Those in contact with infants younger than 6 months also should be vaccinated, since flu shots are not approved for children younger than that, according to the CDC. Another new recommendation says pregnant women in any trimester should be vaccinated against the flu. Previously, the suggestion was only for women beyond their first trimester."

**October 6, 2004 – Sickening news on flu shots** – "Just as the nation begins rolling up a collective sleeve for its annual flu shot, the maker of about half the vaccine earmarked for the United States has announced it will be unable to ship any of its supply." As soon as this situation was made public, "people were calling left and right" to try and obtain a shot.

**October 9, 2004 – Help may be on way for non-high-risk folks** – "The maker of FluMist, a relatively new nasal flu vaccine, said it would nearly double the number of doses it makes to help meet demand caused by a shortage of flu shots. FluMist must be given by a health care professional and is approved only for healthy people ages 5-49. The nasal vaccine is made with a weakened live virus and isn't approved for use by the

elderly or toddlers. The FDA set age limits for FluMist over concern it could increase the risk of asthma attack in young children and might not be as effective for the elderly as a flu shot." FluMist sold for $59.95 per dose.

**October 11, 2004 – Incentives urged for makers of flu vaccine** – "Drug companies have pulled out of flu vaccine production because it's not very profitable and it's financially risky, health experts said. One big problem is demand for flu shots fluctuates from year to year as public interest waxes and wanes. Last season brought huge demand for a flu shot; the year before saw little interest. If a flu vaccine isn't used during the season, it must be discarded. So companies generally throw away millions of doses a year. What would draw more companies into making vaccines? One strategy would be to raise and stabilize demand by getting more healthy adults to get flu shots regularly."

**October 13, 2004 – High-risk patients will be first to get remaining flu vaccine** – Dr. Julie Gerberding, director of the CDC, called "heroes" healthy adults responding to pleas from the CDC to forgo the flu shot this year so that high risk people would be able to get their shots. However, she pronounced "shame on the people who were price-gouging," and vowed to help state officials prosecute them. "There have been scattered reports of price-gouging since the shortage was announced." Some pharmaceutical distributors were selling the vaccine for $900.00 per vial. Regularly priced at $80 to $85 per vial; each vial contains approximately ten doses.

**October 14, 2004 – Price-gouging follows flu shot shortage** – "Around the country, health officials say some suppliers are trying to cash in on the flu shot shortage. In Colorado, hospitals have been offered vaccine for about $100 a shot. In South Florida, one hospital was told the price would be $140 a shot, according to vaccine maker Aventis Pasteur, currently the only company providing flu shots this year. And those are prices for the hospitals."

**October 15, 2004 – Boost in flu shot supply urged** – "Health and Human Services Secretary, Tommy Thompson, said Thursday the federal government should purchase more flu vaccine each year to protect against future flu pandemics. The government is scrambling to redistribute what's left of the flu vaccine supply – about 55 million doses – to high-risk groups including seniors and very young children."

**October 16, 2004 – Flu-shot fever – Doctors and nurses warned not to inoculate low-risk people –** In a 2-full page spread, amid pictures showing long lines and a packed Civic Center, seniors and

others across the country wait patiently in the hopes of getting one of the few available flu shots. At one location "Susie Lee, 75, was the last of 1,000 seniors to receive this season's most sought after commodity; a flu shot. Hundreds of those in line behind Lee – some tethered to oxygen, others leaning on walkers or canes, or being pushed in wheelchairs – were turned away after having spent hours in line. A 79 year-old woman who stood in line more than five hours waiting for a flu shot collapsed and later died. While the event didn't begin until 9 a.m., seniors began lining up at 5 a.m. The serpentine line zigzagged through the building and into the parking lot. By mid-morning, emergency workers had treated several people who'd become ill waiting in line. News of a drastic shortage of the flu vaccine has created panic, especially in the senior set, who are more susceptible."

**October 18, 2004 – Flu vaccine crisis follows decades of warnings** – "Congress, the Justice Department and the Securities and Exchange Commission began investigations into how the nation has been left, on the brink of flu season, with half the flu vaccine it needs. The shortage caught many Americans by surprise, but it followed decades of warnings from health experts who said the nation's system for vaccine supply and distribution was growing increasingly fragile. In recent years, there have been many significant disruptions of vaccine supplies. Flu vaccine can be a particular gamble because the demand for it varies from year to year and companies must throw away what they do not sell. A new vaccine also must be made each year to deal with changing flu strains. Some companies dropped out because of lawsuits, others because they determined it would not pay to retool vaccine plants to meet regulatory standards."

**October 19, 2004 – Supply of flu shots dwindling – Some seniors told to skip vaccine** – "While no specific numbers exist, there are upwards of hundreds of thousands . . . who fall within the high-risk groups that public health officials have said must be given priority. 'It comes pretty close to having a public health crisis,' said Dr. Fernando Guerra, who is on the National Vaccine Advisory Committee of the CDC. He urged healthy residents – even those over 65 – to forgo the flu shots this year in the face of the severe shortage. On Monday, Health and Human Services Secretary, Tommy Thompson, urged seniors to stop standing in long lines for vaccinations. He stressed there will be enough vaccine available for most people who need it. There still are about 20 million doses for seniors, and 4 million doses for children, currently being shipped out at a rate of about 3 million per week, Thompson said."

**October 20, 2004 – Flu vaccine supply to get a shot in the arm** – "An additional 2.6 million doses in influenza vaccine will be available in January, federal health officials said Tuesday as they continued their global search to find even more. Secretary of Health and Human

Services Tommy Thompson, during a news briefing Tuesday, said the additional doses are being produced in the United States by vaccine maker Aventis Pasteur. He also reiterated a plea by Centers for Disease Control and Prevention, director Julie Gerberding that chronically ill and elderly people refrain from standing in long flu shot lines. 'We want the public to know we have the ability to deal with the coming flu season,' Thompson said."

**October 21, 2004 – Area residents go begging for vaccinations** – "Assurances that more influenza vaccine is on the way proved little consolation to" dozens desperate for a shot, yet who had to leave disappointed after waiting in long lines all day at a free clinic. " 'It's important that people know that we're going to be doing this again tomorrow and that it's not necessary to get here early – we have enough,' said nurse Linda Lopez. 'People are freaking out. There's people under the perception that there's a huge shortage,' said Karen Brajcki, clinic coordinator. 'The reality that we're being made aware of is there's more being made available by Aventis to the states in the next couple of weeks. If people who are healthy can just wait, we should get more in November. Lets just take care of the weak first.'"

**October 23, 2004 – Congress yields 3,000 flu shots** – "The new shipment of vaccine, amid a nationwide shortage, came as a surprise to Capitol physician, John Eisold, according to a spokesman for House Speaker Dennis Hastert. The vaccine arrived as some politicians and members of the public complained that lawmakers were going to the head of the line, and offered flu shots even if they aren't in high-risk groups. Some 2,500 people, including an undetermined number of lawmakers, were vaccinated in the Capitol this month."

**October 26, 2004 – Docs, nurses say get over it – meaning both flu and panic** – "There are still about 61 million vials of vaccine in the U.S., pipeline. That is roughly equal to the nation's entire supply in 2000. With proper distribution, that is enough to protect the 42.8 million Americans who really need anti-viral protection, said University of Rochester infectious diseases specialist, John Treanor."

What are we to learn from all of this? For one thing, if you want people to clamor for something, make them believe that they can't have it. Remember when T.V. personality Johnny Carson made the innocent throw-away comment that toilet paper would be hard to get, and the next day there was a national stampede to buy and hoard toilet paper? People literally stripped the stores of toilet paper in a matter of a single day! This type of national hysteria seems to trigger what is known as a collective "scarcity mentality," often seen during impending hurricanes when people make a run on stores to snap-up everything from nails to toothpicks. As Doug McBride, spokesman

from a year when everybody's concerned there's no vaccine to not using what we have."

So, in only a matter of a few short weeks, the 2004 – 2005 influenza season went from: 'We hate to tell you this, but there is a severe shortage of the flu vaccine this year, so you and your loved ones may not be protected. Sorry'! to 'Hey, guess what! We have found a whole bunch more vaccines that we didn't know we had access to, so come get yours – there's still plenty of time to get protected.' It makes one wonder, given the results of this flu season, what it may be like when the bird flu pandemic *does* actually get a grip on the world.

Juggling shortages versus surplus with each flu season is not the only problem involving influenza vaccination. Dr. Les Crawford of the Food and Drug Administration, leader in the nation's global hunt for new vaccines, admitted that, "The liability situation is a real issue when you're involved in pharmaceutical products." This is another way of saying that vaccine manufacturers run a very high risk of liability each and every flu season, (not to mention the problems encountered in children's routine vaccinations), and many have dropped out of the vaccine business as a result.

As an example, a very small notice appeared in the San Antonio Express-News on April 2, 2004, which read, "Hundreds of thousands of children who get flu shots starting this fall could be exposed to a mercury-laced preservative *all but eliminated from other pediatric vaccines*. (italics added) Saying there's no proof of harm from exposure to the preservative thimerosal, federal officials have confirmed they won't advise doctors to choose a mercury-free version." This is astonishing! Is this meant to say that there *is* a mercury-free version? In view of the years and years of controversy over the use of thimerosal in children's vaccines and the fact that it has been "all but eliminated from other pediatric vaccines," wouldn't it be smart to err on the side of caution and choose a "mercury-free version" for children?

No doubt Michelle Mouille wishes she had insisted on a mercury-free flu vaccine for her 5-year old son, Maurice. On October 27, 2004, during the mad rush to obtain what was believed to be some of the few available flu shots left, Maurice received his at a WIC clinic in San Antonio, Texas. In a March 10, 2005, article, Express-News staff writer, Amy Dorsett relates the heart-rending story.

> Less than five months ago, Maurice Lamkin was a healthy 5-year old, running after his bus for trips to kindergarten, fawning over his school crush and helping his mom with his younger siblings. But shortly after receiving a flu vaccine, the small boy with an impish

> grin and a head full of curls lay in an intensive care unit, where for 40 days he was fighting for his life, his brain swelling as puzzled doctors reviewed his case. Today, Maurice is back home, where he once again walks. No longer able to speak, he returned to diapers, and when he eats, his meals must be finely pureed to the texture of baby food.
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> The strange case has caught the attention of doctors from across the country, some of whom suspect the flu vaccine is to blame, others who think it's just a coincidence. A review of his hospital medical records indicates his neurologist thinks the immunization was 'the most likely culprit,' though that doctor couldn't be reached for comment.
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> Maurice's mother said that he began running a fever the evening of the shot and, two days later, Mouille took him to the doctor, who sent him home with an antibiotic and promised he'd be well enough to trick-or-treat. Less than two hours later, he had his first seizure. He was rushed to North Central Baptist Hospital, where he underwent a slew of tests, brain biopsies and had fluid drained form his brain. He eventually was transported to a rehabilitation facility, before returning home on New Year's Day. The Mayo Clinic's Dr. Kenneth Mack, a pediatric neurologist, who consulted on the case when Maurice as hospitalized, said an adverse reaction to the flu vaccine can cause encephalitis.

Was Maurice's flu shot laced with mercury? The article goes on to say, "It is not known whether Maurice's flu shot included thimerosal, a mercury containing preservative used in some vaccines. The American Academy of Pediatrics and vaccine manufacturers agreed in 1999 that the preservative should be reduced or eliminated in vaccines as a precautionary measure. The manufacturer of Maurice's vaccine said some doses contained the chemical, while others did not." My goodness! If, according to the manufacturer's own admission that "some doses contained the chemical" and others did not, then how hard could it be to see that all children get the mercury-free version?

Influenza vaccination is believed to protect especially the very young and the very old. If protection is the goal, then why not go the extra step and insist that children be given mercury-free versions of *all* vaccines? And what about the elderly? In a *Los Angles Times*, September 29, 2003, article titled, *Flu Shots Safer But Less Effective*, the author quoted a Trudeau Institute

passenger or passengers would be transported to a medical-isolation ward at a designated hospital and the rest of the passengers would likely be quarantined for a time, if there appears to be strong reason to suspect that they are in danger of infection.

## HOMEOPATHY AND THE BIRD FLU

As the second edition of this books goes to press it is difficult to determine which *genus epidemicus* homeopathic remedy or small group of remedies will prove to be the most indicated for this virus. But make no mistake, homeopathy will again play just as pivotal a role in dealing with this monster as it did in the previous three 20th century pandemics. Homeopathy has also proved effective for added protection and supplementation to flu vaccination, as well as serving as an option for those individuals who chose not to receive an annual flu vaccination.

As one who has closely monitored this bird flu virus since its first appearance in 1997, it seems apparent that we cannot continue to escape dealing with such a pandemic for many more influenza seasons. What has thus far, kept this virus from exploding into a full-blown global pandemic? Although obviously continuing to mutate, it has simply not yet been able to make the one magic leap that would allow lightning fast human-to-human transmission. The medical world, by its own admission is still woefully unprepared to cope with the magnitude that such a threat represents, despite almost nine years in which to do so.

There are two homeopathic remedies to be considered as 'the first line of defense' in any influenza season or epidemic. The first is Influenzinum, discussed on pages 133-135 and 312-313 of this book. The second is Oscillococcinum, discussed on pages 134 and 333. In view of the significant relationship between Oscillococcinum and the bird flu virus, this remedy may play an even greater role in this particular influenza threat than it ever has before.

In February 2005, an international conference of influenza officials met in Ho Chi Minh City, Vietnam, to discuss long-term strategies for controlling the spread of bird flu throughout the world. One model suggested at that conference was simply to continue the practice already in place in Vietnam, which was vaccinating all poultry and waterfowl. A variety of vaccines have been used, including killed whole virus vaccines and fowl-pox recombinant vaccines. "That is going to be the strategy – to reduce the virus load in ducks, fighting cocks, etc., so the risk of transmission to people is lowered," said one official. Earlier in the month, Thailand had also approved a

program to begin vaccinating all free-range chickens, ducks, fighting cocks, and even tropical birds in an effort to stop the spread of the bird flu.

However, it was acknowledged that there are some serious flaws in the inoculation strategy. In Vietnam alone, there are an estimated 59 million ducks, geese, and other types of waterfowl that roam freely from pond to pond and from one open-air farm to another all over the country. "How can people avoid exposure to the virus when they don't know which ducks are infected and which ones are not"? said Shigeru Omi, the Western Pacific regional director for the World Health Organization. He further added that the public health implications of ducks as carriers of the deadly H5N1 virus are enormous. Underscoring the seriousness of the role ducks play in spread of this virus, the government of Vietnam issued a ban on the breeding of ducks and a cull of all live ducks up through the summer of 2005.

Why the big fuss over ducks and what do they have to do with homeopathy? It has long been known that migratory waterfowl, especially ducks, have been the viral Trojan horses which spread the influenza infection throughout the world. They have always been the natural host carriers of the disease, able to infect all manner of animals without falling ill to the disease themselves. That is, until 2002, when a mutated strain killed a large number of the actual carrier ducks. Since that time, however, the virus has continued to mutate, morphing into a form less deadly to the carrier ducks but still able to cause death to millions of chickens, other birds and, as of August 2005, to 61 humans.

The most disturbing finding of a study by a team from St. Jude Children's Research Hospital in Memphis, TN, is that this H5N1 strain appears to be "transmitted primarily through the upper respiratory tract [of the duck] instead of through fecal matter, as in older strains." This could prove to be significant from a homeopathic standpoint, in that the long recognized homeopathic influenza remedy Oscillococcinum is made from the *intestines - liver* of wild ducks. Whether this will have any bearing on the efficacy of this very important remedy, only time will tell. However, since this is the only homeopathic remedy we have which comes from migratory ducks and it has been used effectively for years in influenza, it therefore seems only prudent to include Oscillococcinum along with the indicated remedy, or remedies, as the case presents and progresses.

It's very important to keep in mind that the H5N1 bird flu virus can progress *very quickly* to the gravest and most crucial stage. Therefore, the *earliest* symptoms during any flu season should be acted upon without delay. Do not allow the symptoms to progress to a more serious state without seeking immediate competent medical advice. Keep in mind that should medical intervention be necessary, continued concomitant homeopathic support has