



**MICROGEN**  
Vaccine for the Surface



**Public Places™**

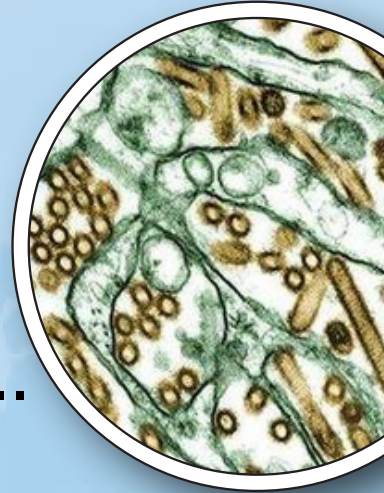


Public Places is a registered trademark of Microgen Inc.

## Avian Flu

# H5N1

It's not a matter of *if...*  
it's a matter of **WHEN**



## US EPA REGISTERED TO KILL AVIAN FLU

Public Places is a US EPA-registered sanitizer, disinfectant and cleaner and believed by US EPA to be effective against the current avian influenza H5N1 strain when applied in strict accordance with the label instructions. These products are available in an economical concentrate and ready-to-use spray and wipe formulation. Both the concentrate and the ready-to-use are US EPA-registered to kill an extraordinary range of 120 plus microbial organisms including all of the pan-demic human influenza strains of the 20th century including:

- Influenza A / Brazil Virus
- Influenza A / Victoria (H3N2) Virus
- Influenza A2-Asian Virus
- Influenza B Virus (Allen Strain)
- Influenza C Virus (Taylor Strain)
- Parainfluenza Type 1

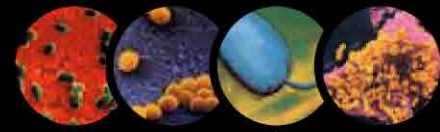
In addition to being among a select group of products believed effective against H5N1 Avian Flu Virus, Public Places is registered for use in and has specific instructions for disinfecting poultry houses as well as meat, poultry and food processing plants. Public Places is also registered for use on both hard, non-porous surfaces and on porous surfaces.

With such versatility and efficacy Public Places is the ultimate choice when disinfecting and sanitizing.

### Microgen Inc.

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## What is Avian Flu?

Avian flu, also known as bird flu, is a virus most often carried in the stomachs of wild birds. There are many different strains of Avian flu which occur naturally among bird populations. Normally these birds do not get sick from the viruses; however it is very contagious among birds and can be lethal for some domesticated birds, including chicken, ducks and turkeys.

## Can people catch Avian flu ?

Avian flu viruses do not usually infect humans, although there have been a number of reported cases recently. When humans do become infected it is almost always the result of bird-to-human infection where there is direct or close contact with an infected bird. Human-to-human infection is very rare.

## Why is there such a focus on Avian flu?

Currently there is a strain of Avian flu, Avian influenza A (H5N1), which is causing concern and has gained the attention of global health organizations and the media. This particular strain is extremely contagious and deadly among birds. Since mid-2004 there have been a number of outbreaks within bird populations in Asia countries including Tibet, China, Japan, Laos, South Korea, Indonesia, Cambodia, Kazakhstan, Malaysia, Mongolia, Russia (Siberia), Thailand, and Vietnam. Recently, outbreaks among migratory birds have been reported in Turkey, Romania, Croatia, Kuwait, Israel, Egypt and Jordan.

## If the Avian flu, including the H5N1 strain, rarely infects humans why is there such concern ?

It is true that the H5N1 does not usually infect humans, although recently there have been over 100 cases worldwide of humans contracting H5N1. The concern surrounding the H5N1 strain has to do not with the current H5N1 strain, but what it could become. This concern lies in the fact that all influenza viruses mutate. Two different strains of virus, one human the other animal can join together in the human body and swap RNA and then mutate into a new strain all together. Because of this, the human flu that will infect millions this year is not the same virus which infected humans last year. It is because of this constant change in the flu viruses that flu vaccines are not always as effective year to year. When developing the latest flu vaccine scientist must try to anticipate how the human influenza viruses will change in order to develop a vaccine which will be effective against a strain which does not yet exist.

## Has this happened in the past?

Yes, in the last 100 years there have been three influenza pandemics. The following excerpt is taken from the US Centers for Disease Control (CDC) website:  
([www.cdc.gov/flu/pandemic/keyfacts.htm](http://www.cdc.gov/flu/pandemic/keyfacts.htm))

During the 20th century, the emergence of several new influenza A virus subtypes caused three pandemics, all of which spread around the world within a year of being detected.

**1918-19**, "Spanish flu," [A (H1N1)], caused the highest number of known influenza deaths. More than 500,000 died in the United States, and up to 50 million people may have died worldwide.

**1957-58**, "Asian flu," [A (H2N2)], caused about 70,000 deaths in the United States.

**1968-69**, "Hong Kong flu," [A (H3N2)], caused about 34,000 deaths in the United States.

Both the 1957-58 and 1968-69 pandemics were caused by viruses containing a combination of genes from a human influenza virus and an Avian influenza virus. The 1918-19 pandemic virus appears to have an Avian origin.