

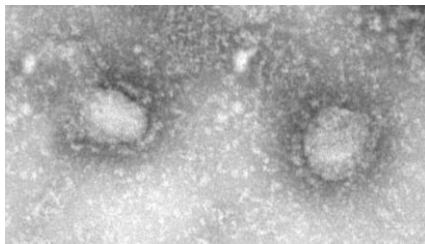
## The Effects of ACA as it Relates to the China Coronavirus

Based on the newness of the China Coronavirus, no analytical testing has been performed on this particular new variation of the Coronavirus. If this new Coronavirus is similar to all of the other viruses previously tested, when exposed to bipolar ionization, it is logical and reasonable to expect similar kill rate results.

### History:

Coronavirus, is one of a variety of viruses that cause colds, have been making people cough and sneeze seemingly forever. But occasionally, a new version infects people and causes serious illness and deaths. Usually coronavirus illnesses are fairly mild, affecting just the upper airway. But the new virus, as well as both SARS and MERS, are different. Those three types of betacoronaviruses can latch onto proteins studding the outside of lung cells, and penetrate much deeper into the airway than cold-causing coronaviruses, says Anthony Fauci, director of the U.S. National Institute of Allergy and Infectious Diseases in Bethesda, M.D. The 2019 version is “a disease that causes more lung disease than sniffles,” Fauci says. COURTESY OF Tina Hesman Saey

### China Coronavirus and its Similarity to the 2003 SARS Outbreak:



**\* 2019 Novel Coronavirus (2019-nCoV)**



**\* 2003 Sars Coronavirus, Em**

In 2003, following the outbreak of severe acute respiratory syndrome (SARS) in Asia, with secondary cases elsewhere in the world, the [World Health Organization](#) (WHO) issued a press release stating that a novel coronavirus identified by a number of laboratories was the causative agent for SARS. The virus was officially named the SARS coronavirus (SARS-CoV). Over 8,000 people were infected, and about 10% died.

The new China Coronavirus exhibits proteins between 70 and 99 percent identical to their counterparts in the SARS virus. Reference: Karla Satchell, a microbiologist and immunologist at Northwestern University Feinberg School of Medicine in Chicago. COURTESY OF Tina Hesman Saey (See SARS kill rate on page 3 for comparison to China Coronavirus.)

\*Images courtesy of Wikipedia

ACA Pathogen Control:

Ions are attracted to pathogens. When the ions combine on the surface of a pathogen, they rob the pathogen of the hydrogen bonds necessary for them to survive. During the final step of deactivation, the ions eliminate hydrogen from the pathogen, making the airborne virus inactive or non-viable. Substantial testing to confirm the kill rates of various pathogens has been performed. Below is a chart that shows the results of testing that has been completed by various 3rd party, independent testing firms.

<b>Pathogen</b>	<b>Time in Chamber</b>	<b>Kill Rate</b>	<b>Test Agency</b>
T.B.	60 minutes	69.09%	EMSL
C. difficile	30 minutes	86.87%	EMSL
Noro Virus	30 minutes	93.50%	ATS Labs
MRSA	30 minutes	96.24%	EMSL
Staph	30 minutes	96.24%	EMSL
Mold Spores	24 hours	99.50%	GCA
E. coli	15 minutes	99.68%	EMSL
Legionella	30 minutes	99.71%	EMSL



Mechanism of Ionization for Inactivating Airborne Virus:

The positive (H+) and negative (O<sup>2-</sup>) ions surround the hemagglutinin (surface proteins that form on organisms and trigger infections). These groups take a hydrogen molecule from the hemagglutinin and change it into water (H<sub>2</sub>O). The ions destroy the virus surface structure. It envelops the structure of the virus on a molecular level. As a result, the virus cannot infect even if it enters the body.

ACA is a replication of nature's method for Inactivating Airborne Viruses with nothing else added.

Test Results History:

Independent testing confirms that bi-polar ionization kills viruses where people and animals are coughing, sneezing and touching objects where the contaminants may have landed, ready to infect their next victim. [See Page 3.]

Previous worldwide test results on viruses:

<b>Virus Tests</b>				
Virus	Test method / effect <sup>a</sup>	Joint test facility	Virus overview	Date
H5N1 avian influenza virus	Test space: 1-m <sup>3</sup> box Exposure time: 10 min. Removal rate: 99.9%	Retroscreen Virology (England) (Prof. John S. Oxford)	Influenza virus that infects birds	Aug 2008
H5N1 avian influenza virus	Test space: 1-m <sup>3</sup> box Exposure time: 10 min. Removal rate: 99.0%	Retroscreen Virology (England) (Prof. John S. Oxford)	Influenza virus that infects birds	May 2005
H1N1 human influenza virus	Test space: 1- m <sup>3</sup> box Exposure time: 25 min. Removal rate: 99.7%	Kitasato Institute, Kitasato University Kitasato Institute Medical Center Hospital	Influenza virus that infects humans	Feb 2004
Feline Coronavirus	Test space: 1- m <sup>3</sup> box Exposure time: 35 min. Removal rate: 99.7%	Kitasato Institute, Kitasato University Kitasato Institute Medical Center Hospital	Feline infectious peritonitis virus	July 2004
Coxsackie Virus	Testing: one-pass test Exposure time: 3.3 seconds Removal rate: 98.9%	Kitasato Research Center of Environmental Sciences, Japan	Virus causing summer colds	Feb 2002
Polio Virus	Testing: one-pass test Exposure time: 3.3 seconds Removal rate: 98.9%	Kitasato Research Center of Environmental Sciences, Japan	Virus causing paralysis in children	Feb 2002
SARS Virus	Test space: one-bath test Exposure time: 3.3 sec. Removal rate: 73.4%	Retroscreen Virology (England) (Prof. John S. Oxford)	SARS disease virus	Oct 2005

EPA Published Position:

A report from the EPA announced that bi-polar ionization (ACA) is a feasible method to help control air borne virus including the Swine Flu, Avian Flu and SARS. The link can be found at...

[http://www.epa.gov/iaq/ciaq/influenza\\_presentation.pdf](http://www.epa.gov/iaq/ciaq/influenza_presentation.pdf).

Conclusion:

ACA quickly and continuously reduces the threat of The Common Cold, E. coli, Tuberculosis, Avian Flu, Swine Flu, SARS, Staph, Mold Spores and Allergens. ACA technology is a system that has been proven by certified analytical independent 3<sup>rd</sup> party accredited laboratory tests to effectively and proactively kill very harmful pathogens on surfaces at astounding rates quickly, effectively and efficiently in addition to controlling gases and odors to vastly improve air quality. Harmful pathogens are effectively and proactively being eliminated in the air and on surfaces where ever the conditioned air reaches throughout the entire space – ceiling to floor and wall to wall – whenever the ECS is operating.

Final Word:

Based upon the similarity between SARS and the new China Coronavirus and based upon extensive independent test results by 3<sup>rd</sup> party independent labs on SARS and other coronaviruses and various other tests previously commissioned, ACA can say with confidence that our technology will logically kill the new China Coronavirus quickly and effectively in the air and on surfaces within any aircraft.

End.