Efficacy of Bi-polar Ionization on Various Pathogens

Target Substance	Species	Testing & Verification Organization	Date of Announcement
Fungi	Cladosporium (black mold, mildew)	Ishikawa Health Service Association	September 2000
		Universitäklinikums Lübeck University Clinic (Germany) (proliferation control effect)	February 2002
		CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)	November 2004
	Penicillium, Aspergillus	Universitäklinikums Lübeck University Clinic (Germany) (proliferation control effect)	February 2002
	Aspergillus, Penicillium (two species), Stachybotrys, Alternaria, Mucorales	CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)	November 2004
Bacteria	Coliform bacteria (E. coli)	Ishikawa Health Service Association	September 2000
	E. coli, Staphylococcus (aureus), Candida	Shanghai Municipal Center for Disease Control and Prevention, China	October 2001
	Bacillus subtilis	Kitasato Research Center of Environmental Sciences	September 2002
		CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)	November 2004
	MRSA (methicillin-resistant Staphylococcus aureus)	Kitasato Research Center of Environmental Sciences	September 2002
		Kitasato Institute Medical Center Hospital	February 2004
	Pseudomonas, Enterococcus, Staphylococcus	Universitäklinikums Lübeck University Clinic (Germany)	February 2002
	Enterococcus, Staphylococcus, Sarcina, Micrococcus	CT&T (Professor Gerhard Artmann, Aachen University of Applied Sciences)	November 2004

Allergens	Mite allergen (dust from dead mite bodies and feces), pollen	Graduate School of Advanced Sciences of Matter, Hiroshima University	September 2003
	Airborne allergens	Asthma Society of Canada	April 2004
Viruses	H1N1 influenza virus	Kitasato Research Center of Environmental Sciences	September 2002
		Seoul University, Korea	September 2003
		Shanghai Municipal Center for Disease Control and Prevention, China	December 2003
		Kitasato Institute Medical Center Hospital	February 2004
	H5N1 avian influenza virus	Retroscreen Virology, Ltd, London, U.K.	May 2005
	Coxsackie virus (summer colds)	Kitasato Research Center of Environmental Sciences	September 2002
	Polio virus	Kitasato Research Center of Environmental Sciences	September 2002
	Corona virus	Kitasato Institute Medical Center Hospital	July 2004

Profile of Professor John S. Oxford

- World authority on virology
- Professor, Institute of Cell and Molecular Science at St. Bartholomew's and The Royal London Hospital, Queen Mary's School of Medicine and Dentistry, London, U.K.
- Founder and Scientific Director, Retroscreen Virology Ltd.,

Expertise
Virology

Publications

- Published over 250 scientific papers
- Co-authored three standard texts:
  1) Influenza, the Viruses and the Disease
  2) Human Virology, a Text for Students of Medicine, Dentistry and Microbiology
  3) Conquest of Viral Diseases

Other Professional Activities

- Appeared on numerous radio and TV programs (BBC, National Geographic, etc.)

- Served as chairman of numerous international scientific and academic conferences

Conferences where Prof. Oxford will serve as Chairman in the near future:

1) Second European Conference on Influenza, September 2005, Malta
2) Optimizing Antiviral Drug Therapy Symposium, October 2005, Berlin
3) The Central Role of Antivirals for the First Pandemic of the 21st Century, January 2006, London

About the University of London

Established in 1836 as England's national university, the University of London consists of 19 colleges with a total of 115,000 students, one of the largest student bodies in the world.

Queen Mary is one of the largest multi-faculty colleges of the University of London. Queen Mary merged with two distinguished medical colleges, St Bartholomew's Hospital Medical College, established in 1843, and the London Hospital Medical College, England's oldest medical school, founded in 1785, to form the School of Medicine & Dentistry. With nearly 8,800 students, the School provides education in a wide range of fields in addition to medicine and dentistry, including biology, chemistry, physics, electrical engineering, computer science, law, literature, and political science.

Dinstinguished Graduates

Alexander Graham Bell, Hirofumi Ito (first prime minister of Japan), John F. Kennedy, Mahatma Gandhi, H.G. Wells, Arthur C. Clarke; seven Nobel Prize winners.

About Retroscreen Virology, Ltd.

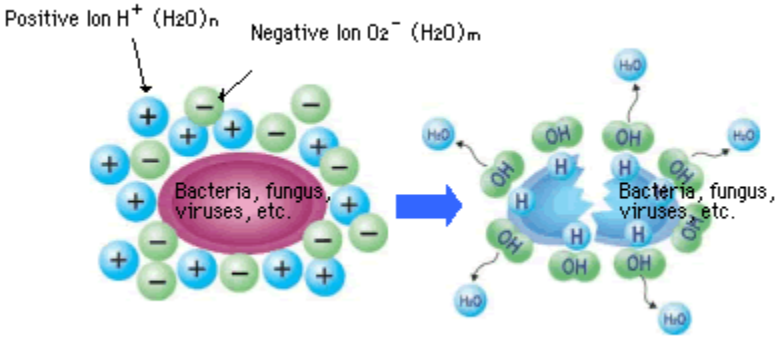
Founded in 1989 by Professor John Oxford, Retroscreen Virology Ltd. is a recognized leader in the research and testing of antiviral compounds and vaccines. In carrying out safety tests of chemical substances, the company works to extremely high standards in compliance with the principles of Good Laboratory Practice (GLP), an international management standard for maintaining high reliability, and has obtained accreditation under the quality control management standard ISO 9001.

Reference

Mechanism of Bi-polar Ionization for Inactivating Harmful Substances

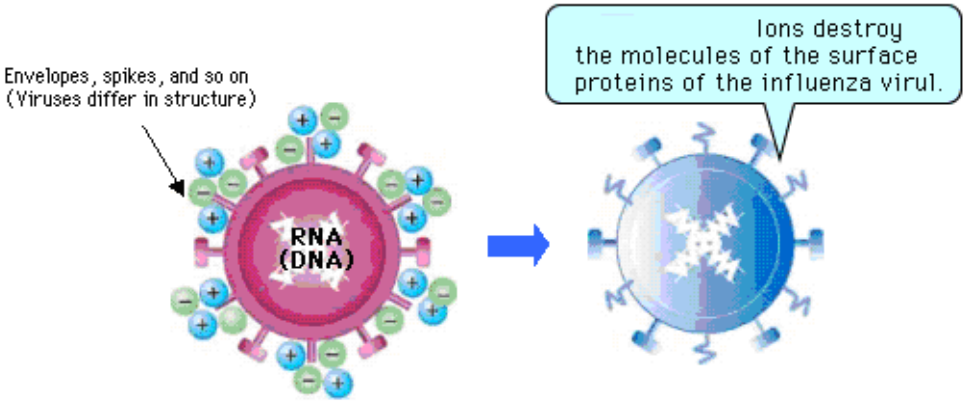
Mechanism for Inactivating Airborne Fungi

The positive (H^+) and negative (O_2^-) ions cluster together on the surface of airborne fungi, causing a chemical reaction that results in the creation of highly reactive OH groups called hydroxyl radicals (•OH). The hydroxyl radical will take a hydrogen molecule from the cell wall of an airborne fungi particle. Inhibits mold infestation as well as controls musty and household odors (caused in large part by mold fungi) as they occur.



Mechanism for Inactivating Airborne Virus

The positive (H^+) and negative (O_2^-) ions surround the hemagglutinin (surface proteins that form on organisms and trigger infections) and change into highly reactive OH groups called hydroxyl radicals (•OH). These take a hydrogen molecule from the hemagglutinin and change into water (H_2O). The ions destroy the virus surface structure, for example its envelopes and spikes, on a molecular level. As a result, the virus cannot infect even if it enters the body.



Mechanism for Deactivating Airborne Allergens

The positive (H^+) and negative (O_2^-) ions surround the airborne allergen and change into highly reactive hydroxyl radicals (•OH). The hydroxyls then deactivate the molecules of the IgE antibody binding site of the allergen. No allergic symptoms occur even if allergens enter the body.