**Airborne COVID-19 Decontamination**

(Reinhard Schuetz, P. Eng.; July 15, 2020)

***Did ‘misinformation’ about airborne dispersion delay COVID-19 mitigation?***

One critical **omission** from existingdispersion data is droplet **evaporation** rate (upon discharge from an infected person). A 100µm (micron) sized droplet will remain airborne for about 5 seconds and a 10µm droplet about 8 minutes. However, due to evaporation, droplets end up being about 10x smaller and **airborne time** increases to about 40 seconds and 12 hours, respectively.

Common sense would dictate that one method of **virus dispersion** entails **airborne transmission**. Unfortunately, during most of the COVID-19 outbreak, that factor has been **downplayed** by various Medical groups and the Airline Industry.

**WHO** (World Health Organization) and some associated Medical Consultants still claim only minimal evidence suggests the occurrence of ‘airborne’ transmission. They seem to cling to the notion that ‘once droplets evaporate, free floating germs don’t exist’. A totally irrational conclusion allowing them to conveniently formulate additional ‘delays’ by demanding ‘more studies’!

**WHAT** is the response from other knowledgeable Organizations? A BOEING funded airplane study, ASHRAE Members, the Center for Disease Control (CDC) and hundreds of Scientists/Academics around the world have all acknowledged that ‘airborne virus dispersion’ is common. Air currents arise via atmospheric conditions, mechanical means (HVAC systems) and/or human movements (in confined spaces). Once detached from aerosol (mist) droplets, viruses can disperse freely.

**WHEN** will regulatory Health, Safety and Environmental agencies realize the fallacy of relying on sub-standard filtration methods, installed in ventilation systems, to prevent airborne germ and chemical transmissions?

**WHERE** do most germicidal outbreaks and Sick Building Syndrome issues occur? Usually in Schools, Medical Centres, Nursing Homes, Aircrafts, Cruise Ships and other confined spaces with a high-density population count.

**WHY?** Because 99.9%+ efficiency filtration claims are ‘misleading’ and provide a ‘false sense of security’. Such claims are conducted under controlled laboratory test conditions (unrelated to actual filter operating environments) using minimum 0.3µm sized ‘particulate matter’. Viruses and toxic chemicals exist in size down to 0.006µm and 0.0006µm, respectively. Thus, NOT conducive for being trapped with 99.9%+ effectiveness by filters (HEPA/MERV, Charcoal or Face Masks).

**HOW** can effective mitigation contaminant transmission be achieved? The solution lies with the patented ***UV-DOX Reactor*** (developed by UV-DOX EnviroTek). The device is capable of immediate and simultaneous destruction of harmful organisms and toxic chemicals via “**Decontamination at the Source**” … but has so far been **ignored** by Health, Environmental and Government agencies relying on inefficient filtration means or displacing contaminants via air changes to another area/space.