

## Building Contagion Control

Arthur V. Martin Ph.D.









### **What Your Clients Need**

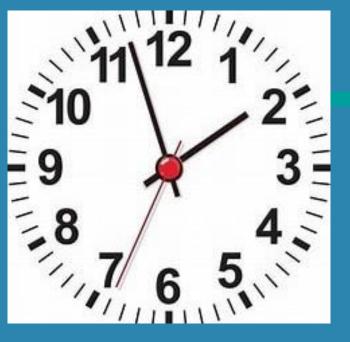
- ➤ Safe and healthy indoor environment
- ➤ Atmosphere that promotes productivity
- ➤ Preservation of the physical facility itself
- ➤ Maintain overall physical aesthetics
- ➤ Increase property values
- > Reduce insurance costs
- Eliminate possibility of litigation

### COVID-19 SARS(CoV-2)



### **A Look Back At 2020 to 2022**

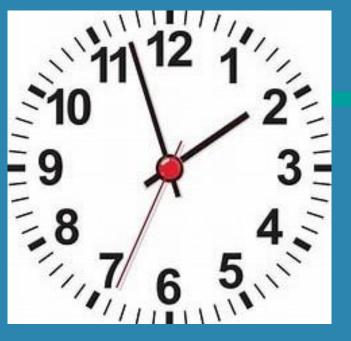
- ➤ COVID-19 unexpectedly arrived from China
- ➤ Businesses were shut down
- >Travel was restricted
- ➤ Workers lost job and income fell dramatically
- ➤ News media spread panic
- ➤ Government has been in total disarray
- ➤ Sickness and deaths overwhelmed hospitals
- ➤ Some financial losses have not yet recovered
- The education system nearly collapsed
- The legal profession has had a field day

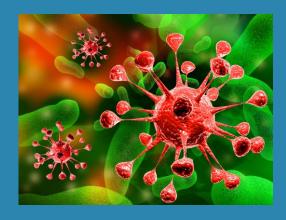




### **Coronavirus Timeline**

- March 2003. SARS Coronavirus Breaks out in Honk Kong.
   8,098 confirmed cases.
- April 2009. H1N1 Virus emerges in Mexico.
   60.8 million global cases.
- September 2012. MERS Virus emerges in Saudi Arabia.
   2,602 confirmed cases.
- December 12, 2019. Cluster of 41 patients in Wuhan, Hubei Province, China begins to experience shortness of breath and fever. (Reported but NOT documented by Chinese Government).
- ➤ January 5, 2020. CDC's National Center for Immunization and Respiratory Diseases (NCIRD) activates Center Level Response for novel pneumonia of unknown etiology.
- ➤ January 17, 2020. CDC begins screening passengers on direct and connecting flights from Wuhan, China at San Francisco, New York City and Los Angeles and plans screening at other major airports.
- ➤ March, 11, 2020. The W.H.O. declares COVID-19 a Pandemic issue.

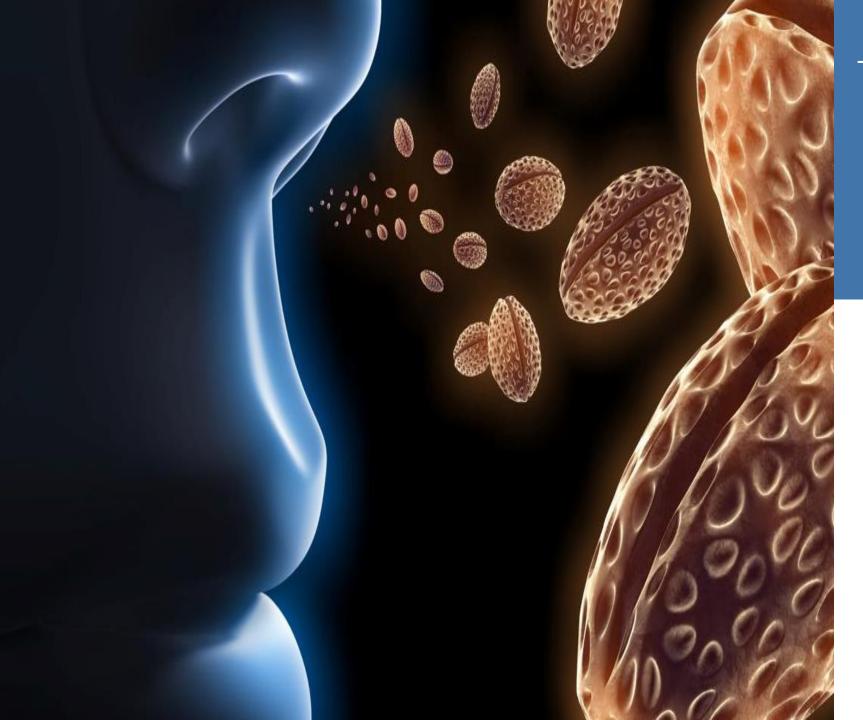




### **Coronavirus Timeline**

- April 10, 2020. The USA surpasses Italy as the global leader for reported deaths due to COVID-19.
   23,036 deaths.
- May 28, 2020. United States (COVID-19) death toll. 100,000+
- > September 22, 2020. United States (COVID-19) death toll. 200,000+
- > December 14, 2020. United States (COVID-19) death toll. 300,000+
- January 18, 2021. United States (COVID-19) death toll. 400.000+
- February 21, 2021. United States (COVID-19) death toll 500,000+
- ➤ May 7, 2021. CDC scraps terminology of "close contact" and admits aerosol virus transmission is major issue.
- ➤ May, 2022. United States Coronavirus (COVID-19) deaths top 1 Million.

It took the CDC 17 months and over 500,000 documented deaths to admit that airborne transmission was the most critical factor for spread of the virus.



The average adult breaths in approximately 11,000 liters of air a day (bioaerosols)

### **Standard Air Content**

Nitrogen 78.09%

Oxygen 20.95%

Argon 0.92%

Carbon Dioxide 0.04%



Fungi, Bacteria, <u>Viruses</u> Yeasts, VOC's, Particulates

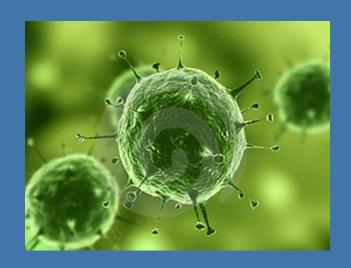


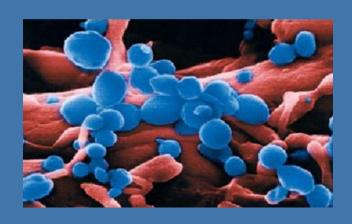
### May, 7, 2021 USA CDC

Several scientists on Friday, May 7, 2021, welcomed the agency's scrapping of the term "close contact," which they criticized as vague and said did not necessarily capture the nuances of bioaerosol transmission.

### 11,000 Liters/Day

### Bio-Aerosols What Are They





A bioaerosol is an assembly of particles of variable biological origin suspended in a gaseous medium (e.g. air) long enough to enable observation and measurement.

USA CDC waited 17 months after COVID-19 appeared to recognize the actual problem



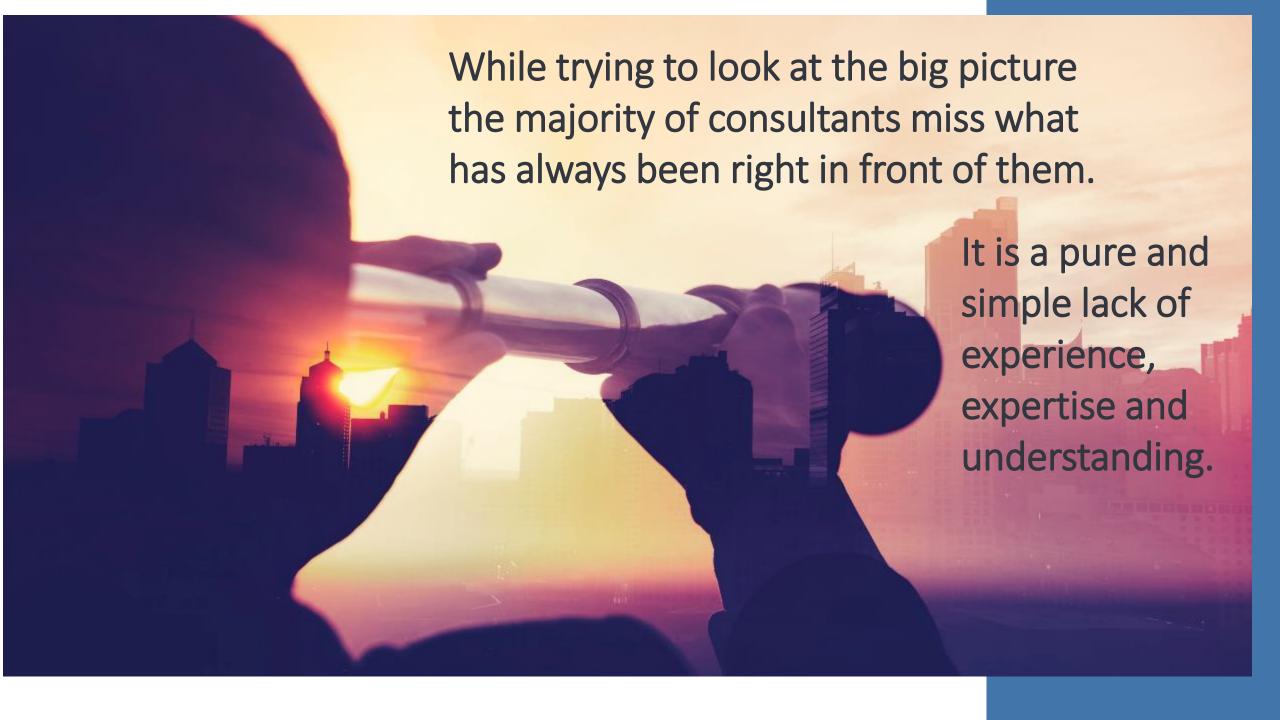


### Don't Be Swayed By Slick Marketing





As the general mass media accelerated panic, existing air quality control methodologies were reinvented and promoted as *new*, *re-engineered*, *modified* and even *next generation*.



### Any Equipment Without Facility Knowledge Will Fail





Pre or Post Pandemic Building Assessments and Proactive Protocols require a thorough knowledge that allows seeing the facility as a system comprised of multiple, interacting subsystems. This starts with the building envelope and the interaction of all the mechanical systems even taking into account geographic location and climate.

### The Process Proceeds To Success Utilizing M3® Methodology

### **INITIAL CONTACT**



Recognition that there is a current or potential problem that will affect overall company performance.

Secure a consultant.

### **MEASURE**

A complete facility analysis is undertaken and biological sampling may be required.

Construct a protocol.





### **MANAGE**

Implementation of the structured protocol is initiated as required.

### **MONITOR**

Scheduled, periodic testing is implemented to ensure continued compliance.



### Who Are We



Arthur V. Martin Ph.D. Principal Scientist



W.H.O. Kochon Prize



Arthur V. Martin Ph.D. is President of Global Infection Control Consultants, LLC headquartered in North Miami, FL. He has 40+ years global expertise managing and mitigating pathogenic bioaerosol contamination in buildings along with design and construction of critical controlled environments including Hospital Operating Suites, Pharmaceutical Clean Rooms and Biosafety Laboratories and High-Rise Residential Building Environmental Control.

A former ASHRAE member, he has conducted in excess of 4,000 assessments and his past projects have been recognized with 1st place Awards for Existing Health Care as well as Existing Institutional Buildings. One of his projects was voted the Most Efficient Building in The Nation. He is the Environmental Consultant to The Faisal Group of Companies in Riyadh, Kingdom of Saudi Arabia, a member of the W.H.O. Stop TB Board, and a Member/Researcher of the Infectious Diseases International Research Initiative, Ankara, Turkey as well as a Collaborative Researcher with Camarines Norte State University, Daet, Philippines. Dr. Martin is also the Chief Scientist of a Tianjin, China Biotechnology company.

He is a past nominee for the W.H.O Kochon Prize for innovative work with T.B. in buildings thereby reducing treatment times and allowing more infected people to be treated quicker, more efficiently and less costly. *In 2021 he was nominated for a Nobel Prize, specifically for innovative work with COVID-19.* 

### **Partial Client List**

### Countries / Governments

Australia Hong Kong

Bangladesh Indonesia

Bermuda Laos

Canada Malaysia

China Netherlands

Colombia New Zealand

Costa Rica Nigeria

Denmark United States

East Africa

Guam

### **Insurance Companies**

The Hartford Insurance Co.

Auto Owners Insurance Co.

State Farm Insurance Co.

Nationwide Insurance Co.

Allstate Insurance Co.

The Travelers Insurance Co.

Liberty Mutual Insurance Co.

Farmers Insurance Co.

Prudential Insurance Co.

Amica Mutual Insurance Co.

Erie Insurance Co.

### **Private Client List**

### **Textile Industry**

Philips Van Heusen (500+ locations)

Wuxi Jinmao Limited Company, China

Beximco Fashions Limited, Bangladesh

Azim Group Garments Div., Bangladesh

East Dye Limited Company, China

Other Global Market Segments

Hotels

**Elementary to College Facilities** 

**Property Management Companies** 

Airports

Supermarkets

Casinos

**Greenhouses for Cannabis** 

These are partial listings of our broad spectrum market segment penetrations

### **Medical Facilities Clients**

King Fahad Medical City, Saudi Arabia

El Amin General Hospital, Saudi Arabia

Glen Eagles Hospital, Malaysia

Pantai General Hospital, Malaysia

Sultan Ismail Hospital, Malaysia

Center For Chronic Disease Control, China

Mission Health Care, USA

Houston Health Care, USA

Trident Medical (3 facilities) USA

Colleton Medical Center, USA

Summerville Medical Center, USA

Mission Memorial Wound Care, USA

Bayfront Medical Center Hospital, USA

St. Anthony's Hospital, USA

Hospital Dialysis Center, USA

St. Petersburg General Hospital, USA

Sheridan Dental Clinic, USA

Asheville Neurology, USA



## Pre-Emptive Pandemic Planning

- Thorough and complete survey of your facility environmental systems including HVAC.
- Complete pathogen matrix collection and laboratory analysis done.
- Review of any current technologies being used for building protection.



### Post Pandemic Protective Protocols

Structured protocols based on your facility design, layout, current protective measures and systems.

Individually structured to meet your individual, specific situation.



# Biosecurity Planning for New Construction

- Selection of top technology equipment and systems for environmental security.
- Selection of qualified, licensed installation and service entities.
- Installation oversight to ensure protocol compliance.



### Pathogen Safety Planning Seminars

. Informative and instructive technology seminars.

Applying real world tested, proven and approved technology to help you:

Reduce operating costs.

Ensure a safe and healthy indoor environment.

Provide documentation to possibly reduce employee insurance costs.

Learn how to prevent litigation.

### **Contact Us At Your Convenience**



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