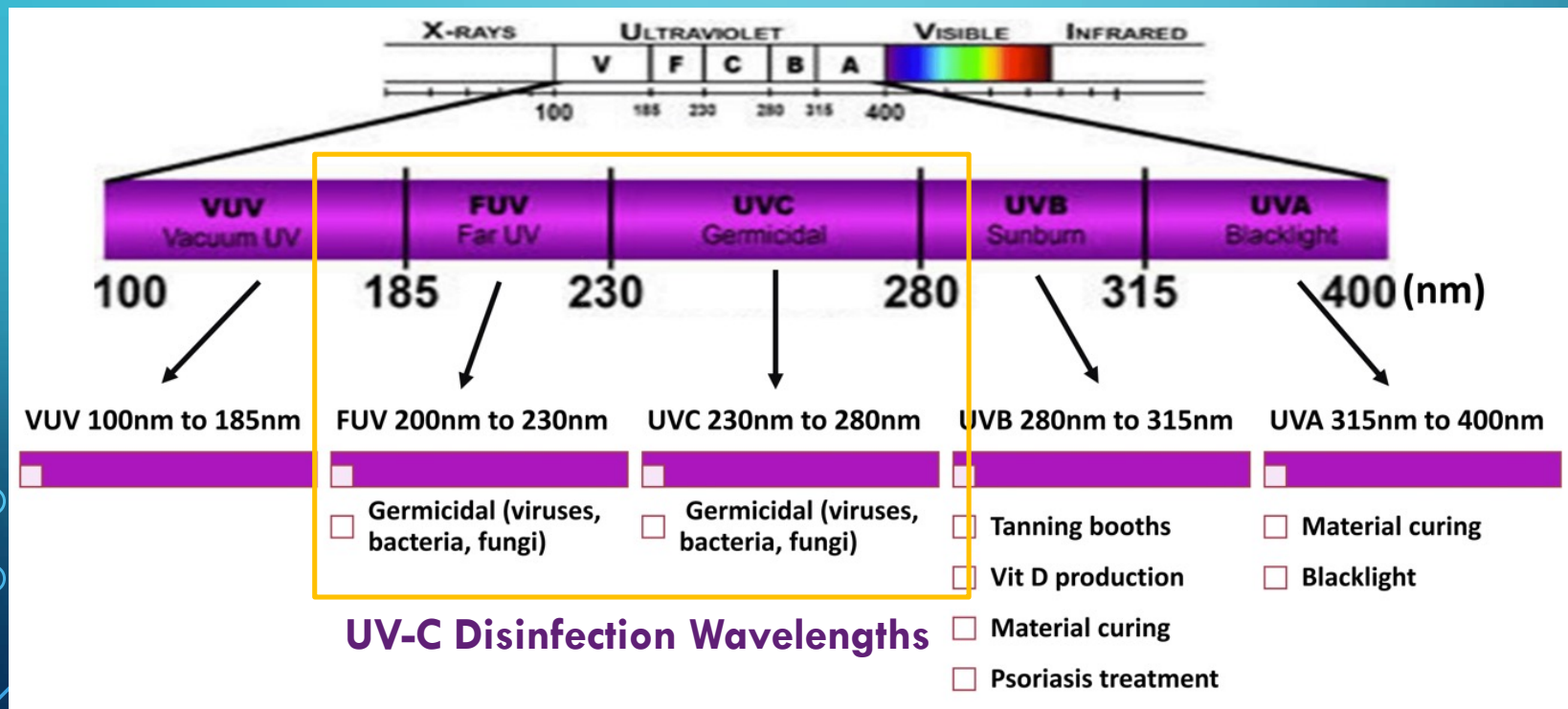




UV DISINFECTION IN AIR FILTRATION AND BEYOND

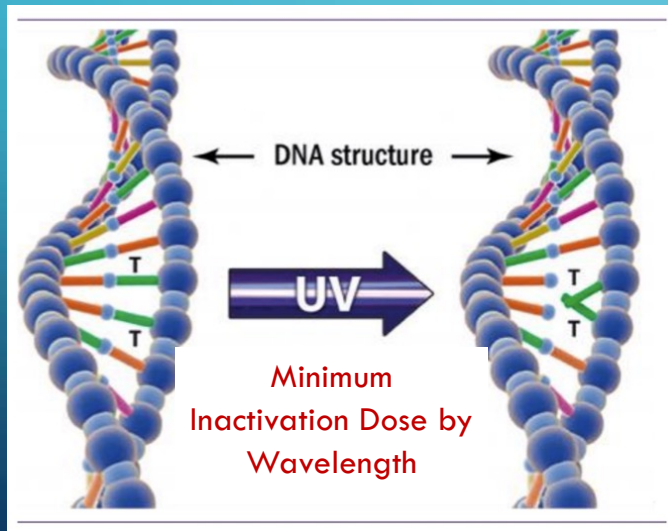
*PRESENTED BY
THE INTERNATIONAL ULTRAVIOLET ASSOCIATION
HEALTHCARE/UV WORKING GROUP
11 MARCH 2022*

Ultraviolet Physics Basics – Which Wavelengths Matter

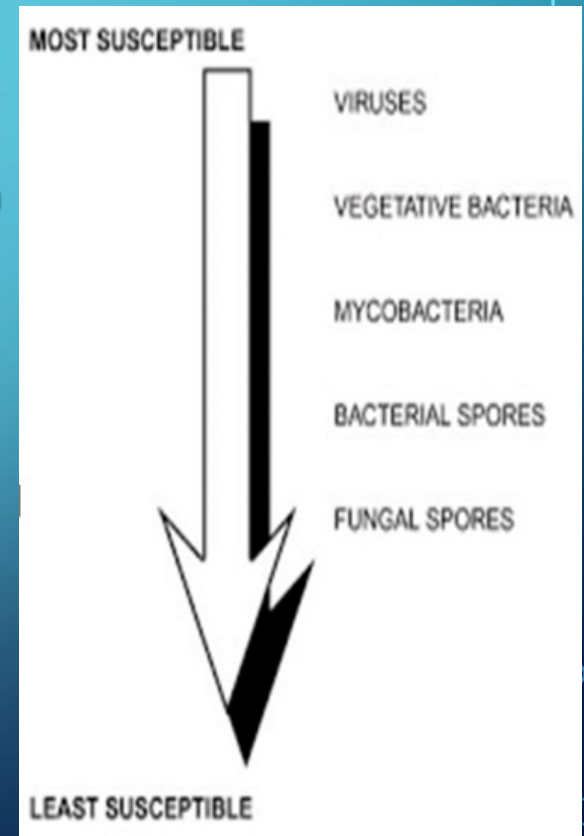


Ultraviolet Disinfection Basics

- ✓ UV-C disrupts a Pathogen's DNA & RNA, so, they can't reproduce.
- ✓ Disruption depends on Wavelength, Dose & Pathogen



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COVID-19 Related Developments

Renewed Emphasis on Airborne Pathogen Control & Disinfection

- Time Magazine Article "If We're Going to Live With COVID-19, It's Time to Clean Our Indoor Air Properly" 1 Feb 2022 – Dr. E. Nardell, Harvard
(<https://time.com/6143799/covid-19-indoor-air-cleaning/>)
- W.H.O. Webinar "Disinfection using Ultraviolet Radiation" 17 Dec 2021 - Nardell
(<https://who.zoom.us/rec/share/jj-g1XfEdxMHIE9UaithXIFZ8fQvDLtrjofThW9QpH3m0dgdIxsRKIZHf0pWpJfUC.VXXhGvIX4EvLX41W>
Passcode: 0@wQtVC\$)

70+ Upper-Air UV-C Disinfection Units currently listed on Amazon

- Mainly Traditional 254nm Hg, also 265nm-280nm LEDs and 222nm Excimers
- Available in both Wall & Ceiling Mounts; Uses Standard Electrical Power

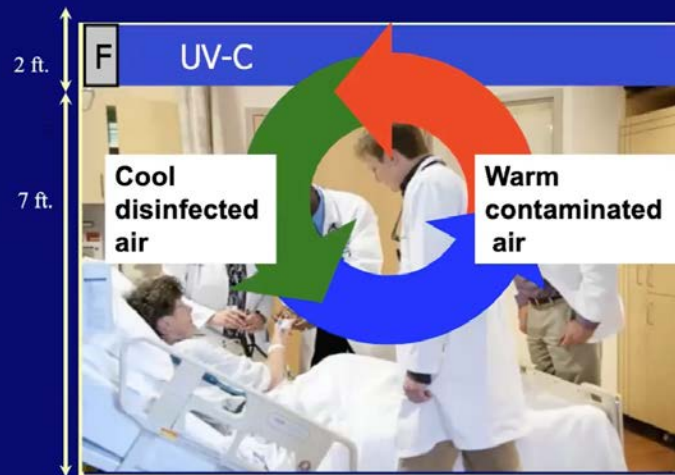


COVID-19 Related Developments

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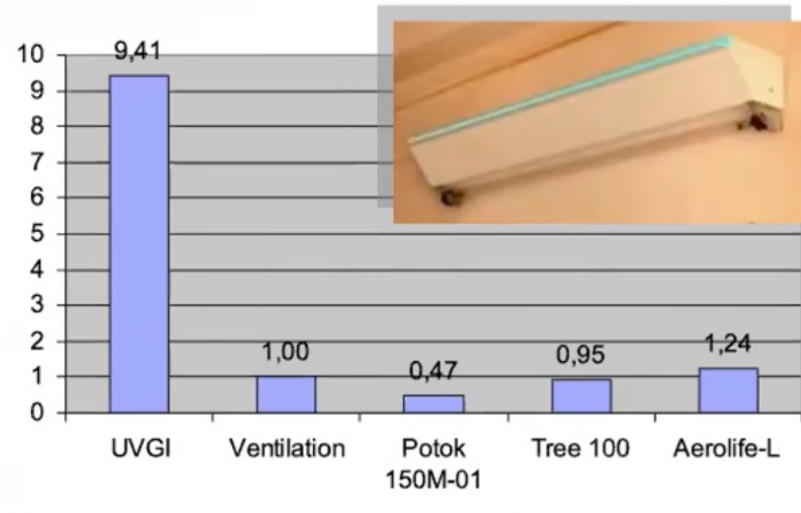


Upper Room UV Disinfects a Large Volume of Air at Once



Low velocity ceiling fans assure good air mixing

Relative economical efficiency (Ventilation = 1,0)



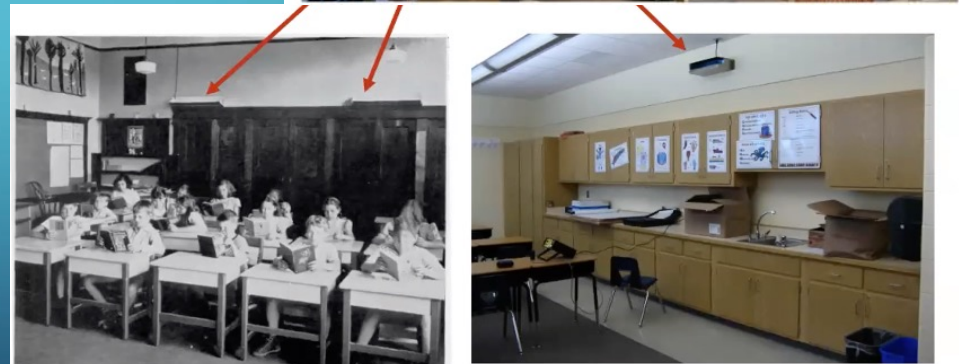
From presentation by Dr. E. Nardell, Harvard, W.H.O Webinar 17 Dec. 2021

Benefits of UV Deployments

- **Can Work Well in Occupied Spaces**
 - Less Risk of Spreading Airborne Pathogens
 - Studies Underway on
 - Absenteeism in Schools, Offices, etc.
 - Preventing the Next Pandemic & MDRO's
 - Reduced Hospital Loads
- **Easily Retrofitted to Supplement Existing Building Systems**
 - Stand-Alone Filters
 - Supplemental In-Duct Units after HEPA Filters
 - Upper Air & Whole Room
 - **Not Recommended: UV WANDS**

Deployment Example

Bluestone Lane, NY coffee shop



From presentation by Dr. E. Nardell, Harvard, W.H.O Webinar 17 Dec. 2021



IUVA HEALTHCARE WORKING GROUP

Our Group is a Knowledgeable, Accessible & Highly Collaborative Resource

- 140+ members, 15+ Countries
- Monthly Calls: 25-30 callers; 1 hr/ call
2-5 New Attendees Each Month
10-15 Presenters in each call
- Next Call 17 March @ 2pm EST;
focus – Standards & Collaboration
- You're invited to Join us

It's All About Saving Lives