



XCMR[®]

BIODEFENSE SOLUTIONS



Transformative Infection Protection Capabilities

Next-Generation PPE



- Innovation in **real-time respiratory protection**
- **Modernizes outdated PPE** with gains in efficacy, performance and comfort
- **Proprietary UVC** micro reactor technology variable protection levels
- Reusable **Pathogen inactivation** vs. filtration
- **Reduced** user **encumbrances** (weight, sound, breathability, reusability, comfort, etc.)

Near-Field Infection Prevention (NIP)



- **Improved decontamination methods** for disinfection of confined air spaces and surfaces
- **Invisible biosafety barrier** against aerosol transmission of pathogens
- **Source control** in close-contact environments
- Enables **wearable** biodefense devices.
- **Layered protection** that works together with existing 'built' environment

Surgical Site Infection Prevention (xIP)



- **NIP technology for SSI** (Surgical Site Infection) protection and control
- **Combines surface and air decon methods** to inactivate pathogens and prevent infection.
- **Addresses antimicrobial resistance** concerns to **reduce HAIs**
- Designed for use in **various surgical and medical settings** (mobile or fixed use)

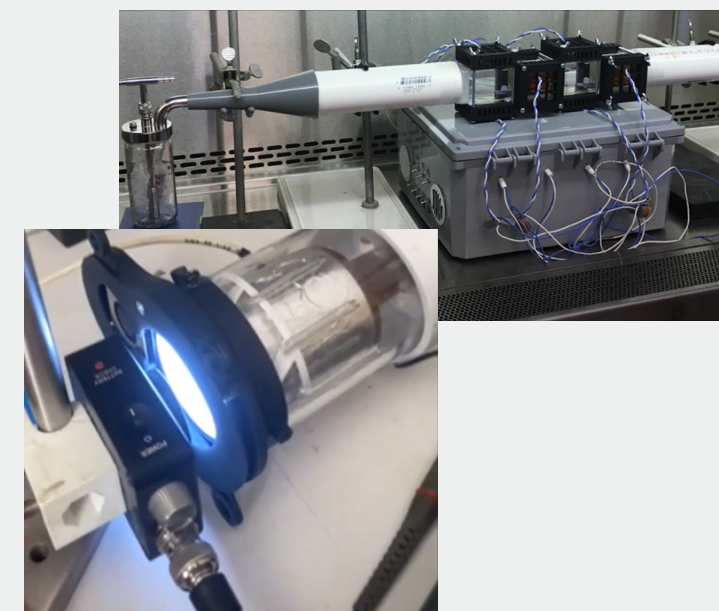
XCMR EMITR Platform



- **Electromagnetic Energy for Infection Transmission Resiliency (EMITR)[™]**
- Leverages '**connected**' devices, incorporating, **AI, data and sensor fusion** to enable infection transmission resiliency at global scale
- Harnesses **coordinated, controlled and directed full spectrum UVC** for safe infection prevention

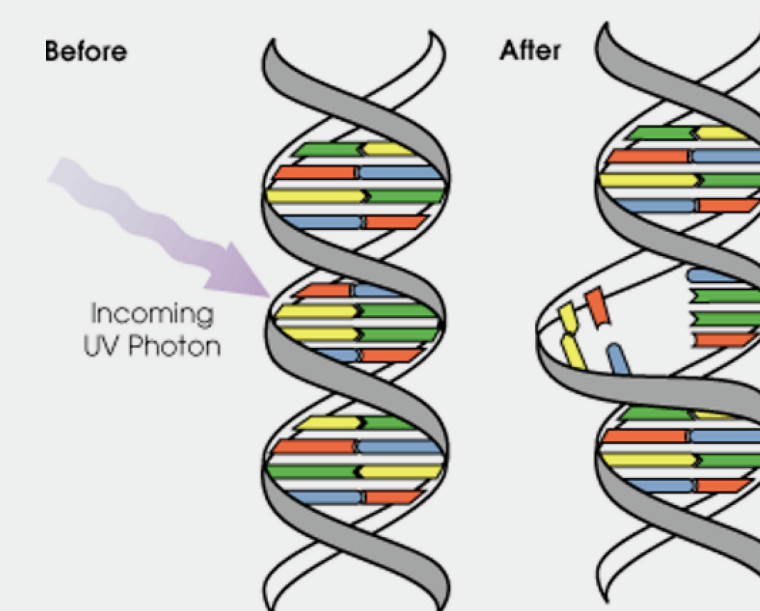
Fundamental Science and Testing

- Optical and biological validation
- Academic collaboration with laboratory testing and discovery
- Real-World application testing
- Contributing seminal findings in literature on UVC science to academia and industry



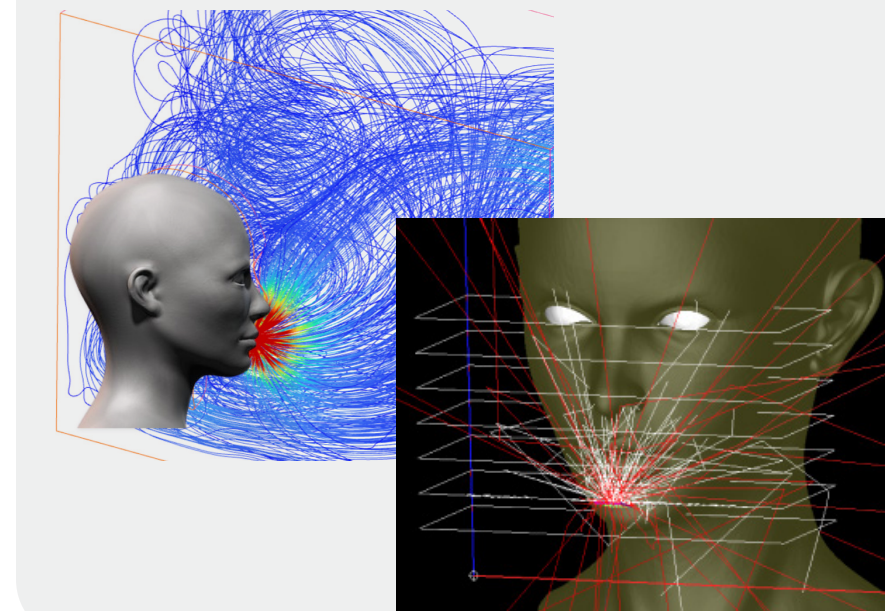
UVC Disinfection Mechanism

- UVC disrupts DNA/RNA replication
- Far UVC (200-230nm) human safe
- Broadly effective against a variety of aerosolized and surface pathogens (bacterial, viral, fungal)



Advanced Simulation and Modelling

- Deep experience in complex UVC-based systems
- Electro-optical design & simulation is paired with CFD analysis for robust engineering design
- Custom tools enable rapid design and iteration of optimal systems.



- Assembled world-class multidisciplinary science and business team
- Awarded six(6) US Government contracts in >36 months totaling \$2.67 million
- Contracts with DoD/Air Force, DoE, EPA, (8) leading commercial organizations and (4) academic research institutions



- Filed worldwide patents on IP with first awarded in October 2023
- Presented three (3) comprehensive talks validating XCMR technology with supporting experimental data at the 2023 International Ultraviolet Association (IUVA) World Congress in Dubai (see www.xcmr.co/videos)



www.xcmr.co

Key Partners

info@xcmr.co

