



**ondine**

Simple Solutions to Complex Infections

ONDINE BIOMEDICAL INC.

# Management Update

*June 2022*

# Forward-Looking Statements

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# Our Business at a Glance

We are a life sciences company at the forefront of development of photodisinfection-based therapies to address the large and growing need for solutions to a broad spectrum of infections.



**70+**

**Patents**

*Granted & Pending*



**7+**

**Products**

*Commercial + Pipeline*



**\$200m+**

**Invested in Ondine**



**26**

**Employees**



## **Solid foundation**

>10 years developing photodisinfection technology



## **Proven**

>70% reduction in HAIs in Vancouver



## **Regulatory approval**

CE Mark in the EU

Health Canada approval

Phase 2 in progress in USA

QIDP, Fast Track accelerators

# Continued Growth, Strong Future

Ramping Up  
Commercial Adoption

**137%**

Revenue CAGR  
2019 - 2021



Healthcare & Enterprise  
Growth in both segments

**389%**

Manufacturing  
Increase in production

Advancing  
Clinical Programs



US FDA Phase 2  
Currently recruiting



**4**  
SARS-CoV-2 trials  
Demonstrated effectiveness



US FDA Phase 3  
Planning underway

Corporate Milestones

**\$37.7m**

Equity Raise  
Listing on AIM Market

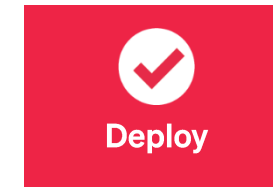
**\$0**

Debt at year-end  
2021



Board of Directors  
Significantly expanded

# Major Milestones



Strategic relationship with HCA Healthcare formed  
(2017)



Fast Track granted by US FDA  
(2019)



CE Mark granted  
(2020)



Adoption in enterprises due to COVID-19  
(2020)



ICPIC Innovation Award of Excellence  
(2021)



\$37.7m raised, listing on AIM  
(Dec 2021)



Publication of significant results at leading hospital in Canada  
(2014)



QIDP designation received from US FDA  
(2018)



New, compact and mobile Steriwave laser  
(2020)



*In vitro* testing confirms efficacy against SARS-CoV-2  
(2020)



4 new Steriwave deployments  
(2021)



US FDA Phase 2 trial commenced  
(2021)



New low-cost, high volume nasal light illuminator design  
(target Q4 2022 release)

# ONDINE'S PHOTODISINFECTION TECHNOLOGY

*One platform, many applications*



## Patented formulation

Applied via

Swab 

Syringe 

Spray 

Bandage 

## Specific Light Dose

Delivered via

 Tip

 Balloon

 Fiber

 Panel

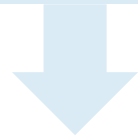


# How It Works

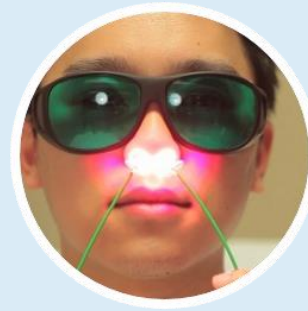


## Application

Apply photosensitizer  
to target area



**Photosensitizer  
binds to microbes**

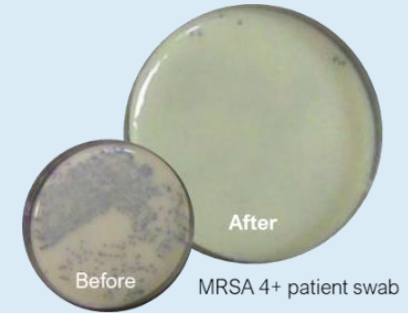


## Activation

Illuminate the area

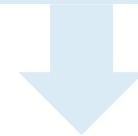


**Light activates  
photosensitizer**



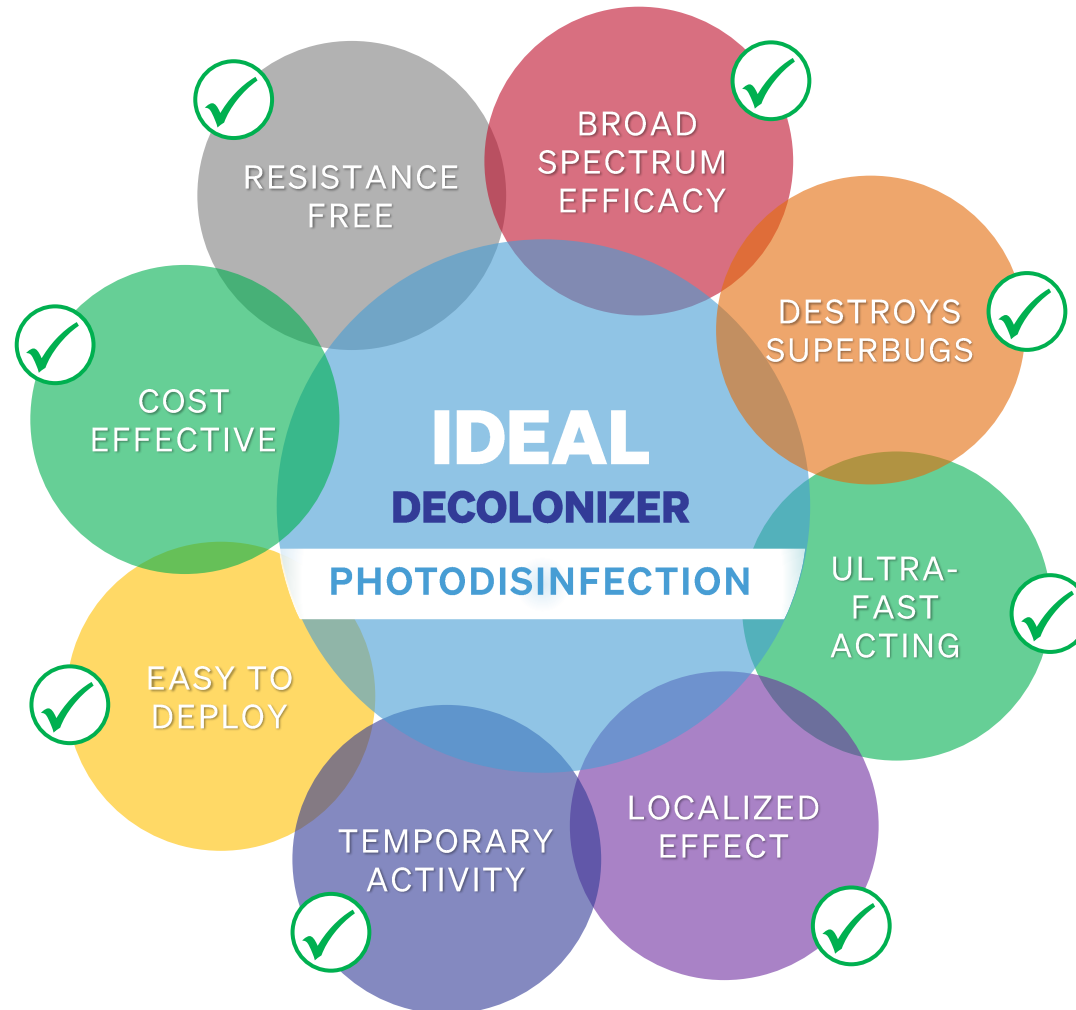
## Results

Rapid antimicrobial and  
anti-inflammatory results



**Reactive oxygen species  
destroy microbes**

# Disruptive, non-antibiotic platform



**Unique  
photonic solution  
to the HAI crisis**



# Product Pipeline



Steriwave

COVID / Flu

VAP

Burns

Sinuwave

## One platform, many applications

- Prevent serious infections
- Decrease morbidity and mortality
- Effective against superbugs
- Non-antibiotic approach
- Excellent cost-benefit ratio

**70+ patents**  
GRANTED & PENDING



	Therapy Area	Development	Human Trials	Approved		
<b>PREVENTION</b>						
<b>Steriwave™</b>	HAI (nasal decolonization)			✓	✓	*
	COVID-19 / Influenza (upper airway decolonization)					
<b>OND1002</b>	Ventilator-associated pneumonia (VAP) (endotracheal tube decolonization)					
<b>OND1003</b>	Burns (burns decolonization)					
<b>Uriwave™</b>	CAUTI (urinary catheter decolonization)					
<b>TREATMENT</b>						
<b>Sinuwave™</b>	For chronic sinusitis			✓		
<b>OND1004</b>	For chronic wounds					
<b>OND1005</b>	For chronic ear infections					

\*Active IND with US FDA, granted QIDP and Fast Track status, undergoing US Phase II clinical trial.

# Compelling Value Proposition



Single, 5-minute treatment



Immediate efficacy

99.9%+ Kills\*

Bacteria

Viruses

Fungi

Broad-spectrum



No resistance



High compliance

*Competitive advantages:*

FASTER

ALL PATHOGENS

MORE RELIABILITY

BETTER OUTCOMES

# Immediate Efficacy

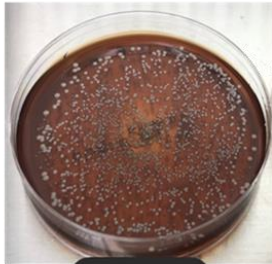


Steriwave

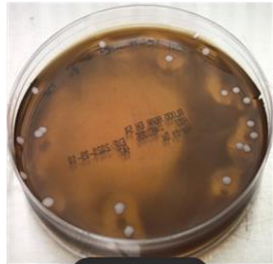


Povidone iodine

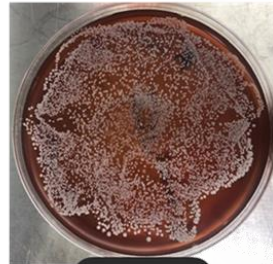
**Broad-spectrum**  
*(Blood Agar)*



Before



After

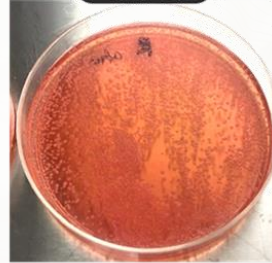
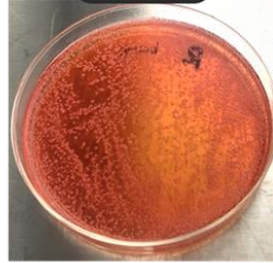
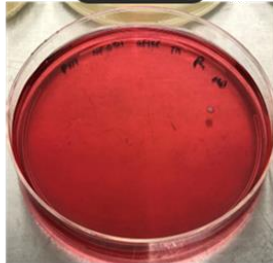
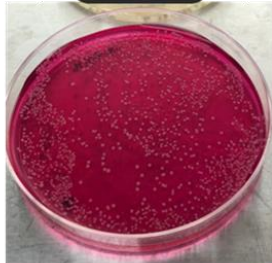


Before



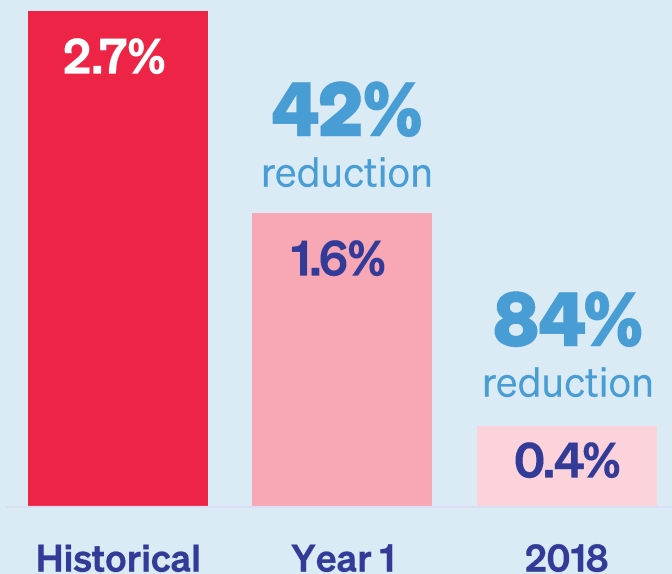
After

**Staph aureus**  
*(Mannitol Salt Agar)*



# Compelling Decade of Results

## Vancouver General Hospital (VGH) surgical site infection rate



## ANNUAL PHARMACOECONOMIC IMPACTS\*



# Extrapolating to US Hospitals

In the US:

**2.76%**  
Average SSI rate

**\$20k**  
Average SSI cost

=

**\$552**  
Preventable cost  
*Per surgical patient*

**40%** SSI reduction

**342%** ROI

**\$171**  
Net savings  
*Per surgical patient*

**80%** SSI reduction

**783%** ROI

**\$392**  
Net savings  
*Per surgical patient*



# Market size / opportunity



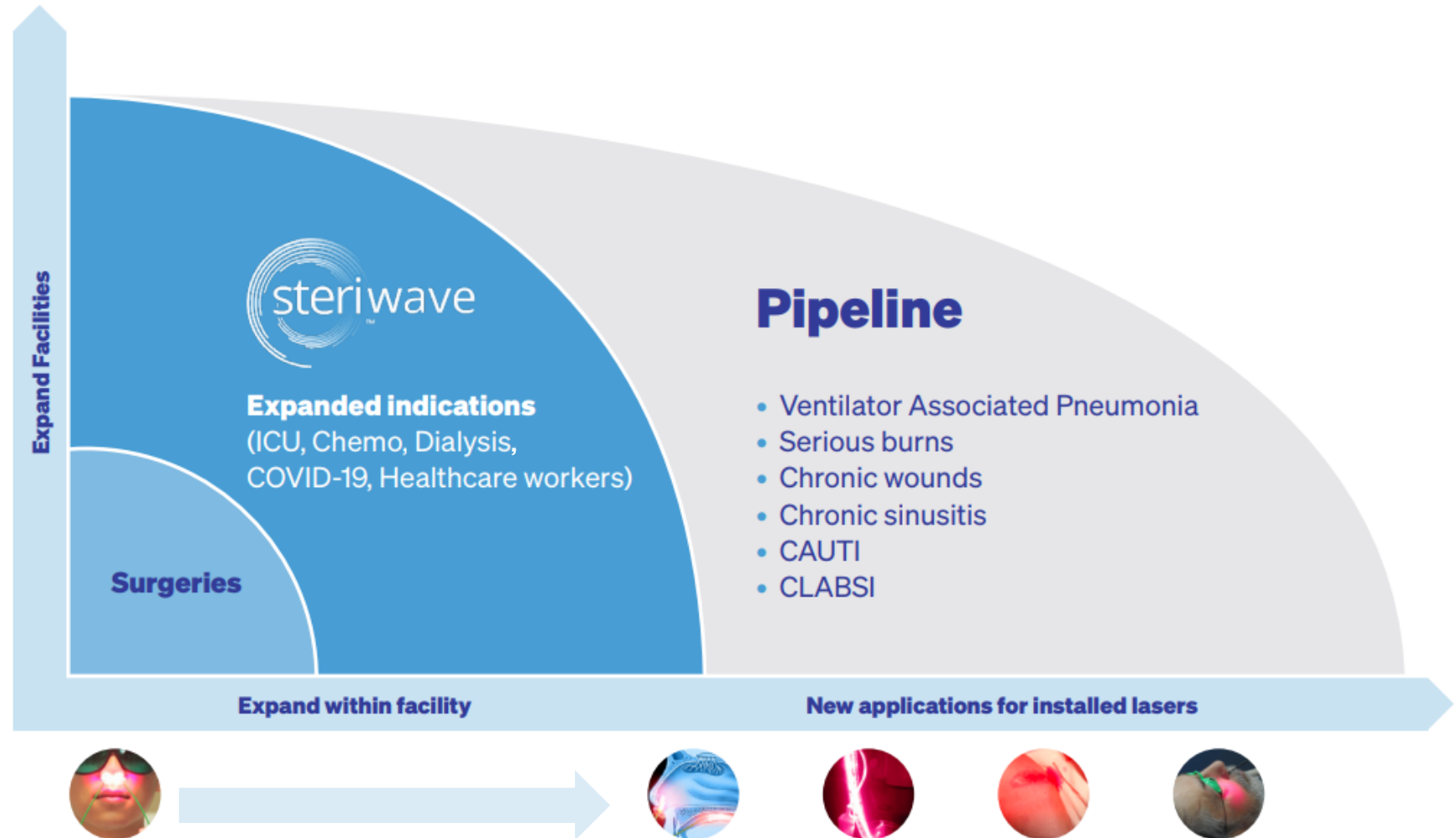
Specialty clinics



High-volume surgical centres



Large health systems and premier hospitals



# Phase 2 Progress / Phase 3 Plan

## PHASE 2



### PATIENT RECRUITMENT

On target to complete **mid-year**

- ✓ Recruitment rate **exceeding 70%**
- ✓ **No SAEs** (serious adverse events)
- ✓ Hospital **integration experience** critical for Phase 3
- ✓ Strong **corporate HCA support**

## PHASE 3



### PENDING REGULATORY FEEDBACK

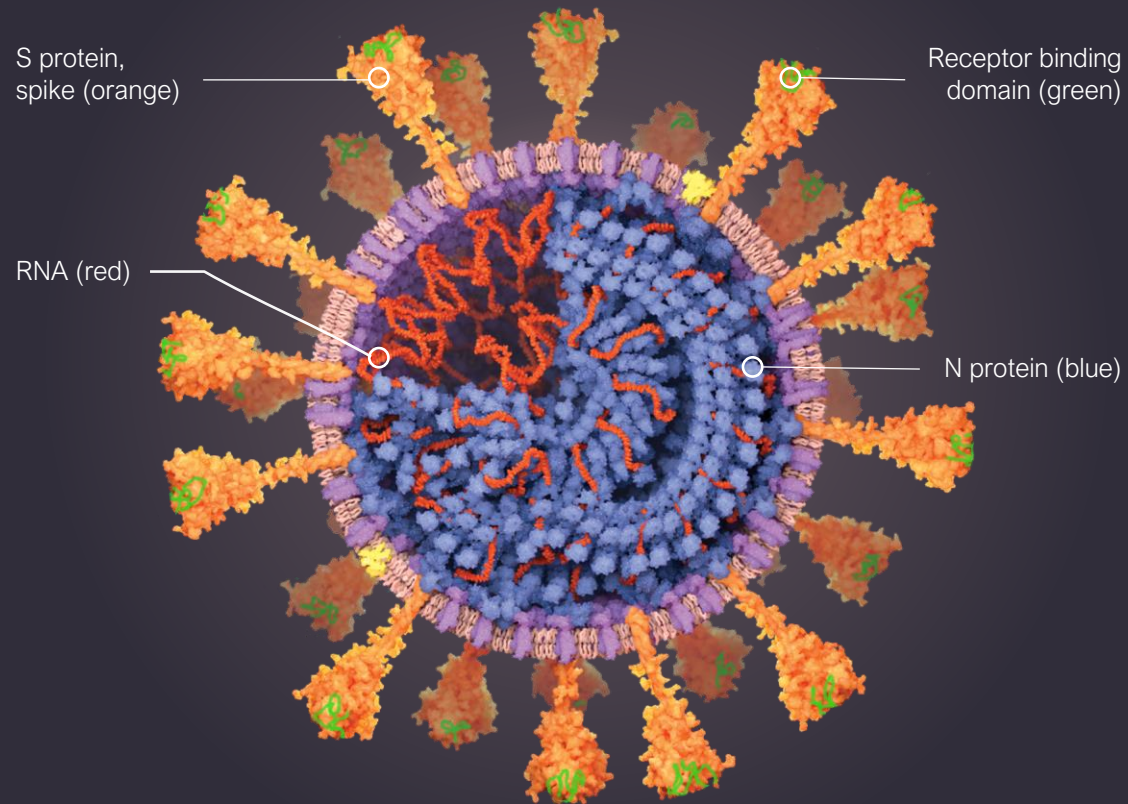
**Planned for Q4**

- ✓ Contract Research Organization (CRO) **selection complete**
- ✓ Study protocol development **nearing completion**
- ✓ EOP2 submission **under development**

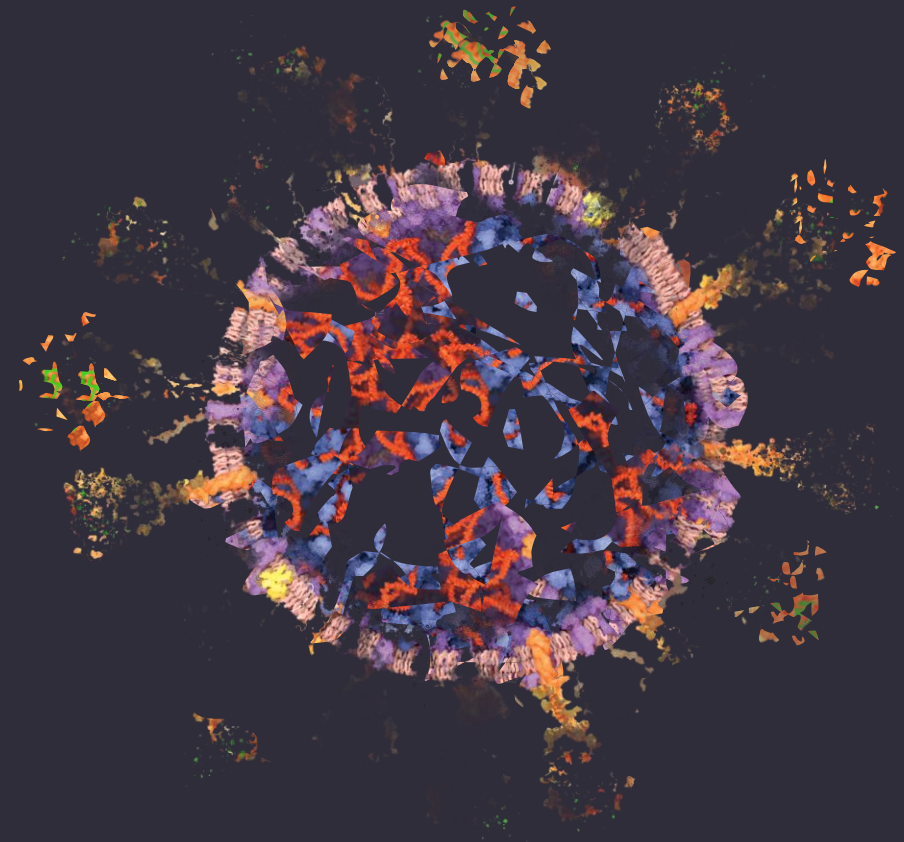
US FDA accelerators granted: **Qualified Infectious Disease Product (QIDP) status and Fast Track**

# Successful COVID-19 Program

BEFORE



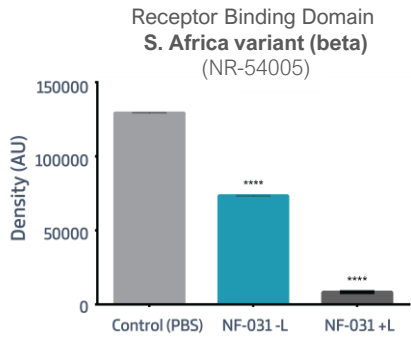
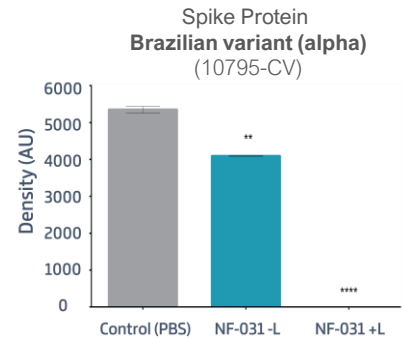
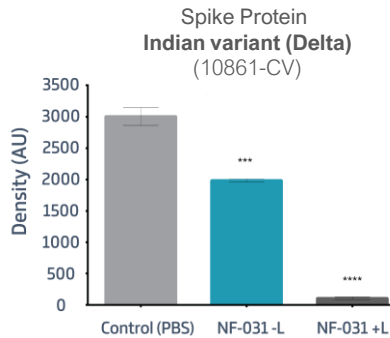
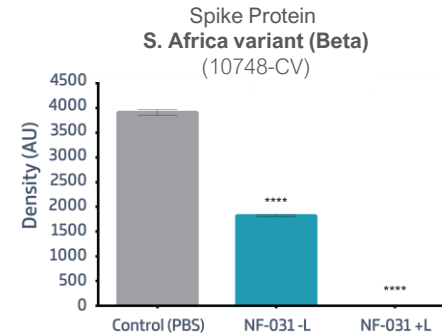
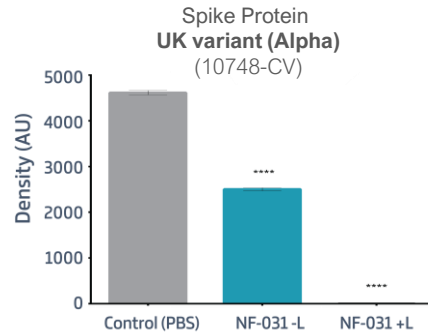
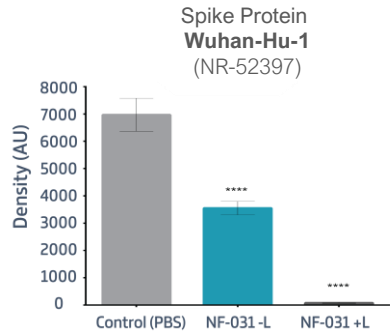
AFTER



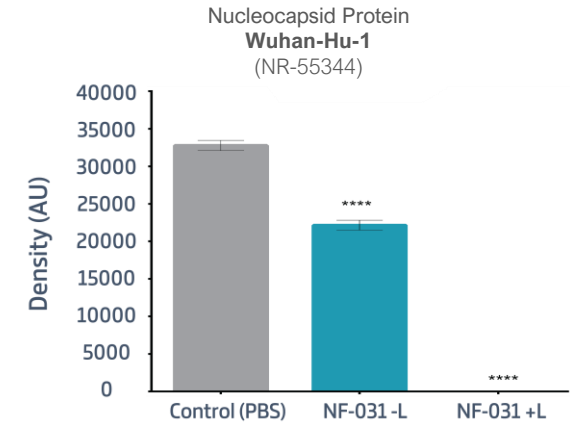


# Destroys all known variants

## Spike protein and receptor binding domain destroyed



## RNA genome destroyed



*Legend:*

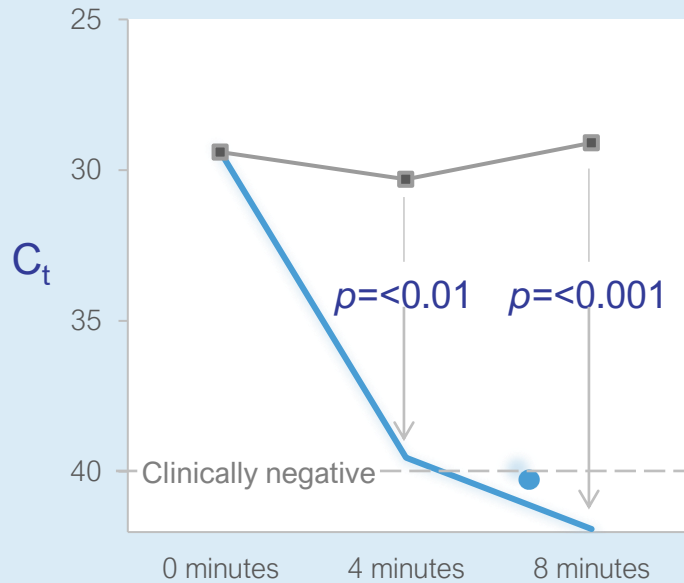
- NF-031-L = photosensitizer only
- NF-031+L = photosensitizer + 2 minutes of illumination

*Sources of viral protein:*

- R&D Systems, Inc. MN. for all spike protein samples.
- BEI Resources, NIAID, NIH for receptor binding domain and RNA samples.

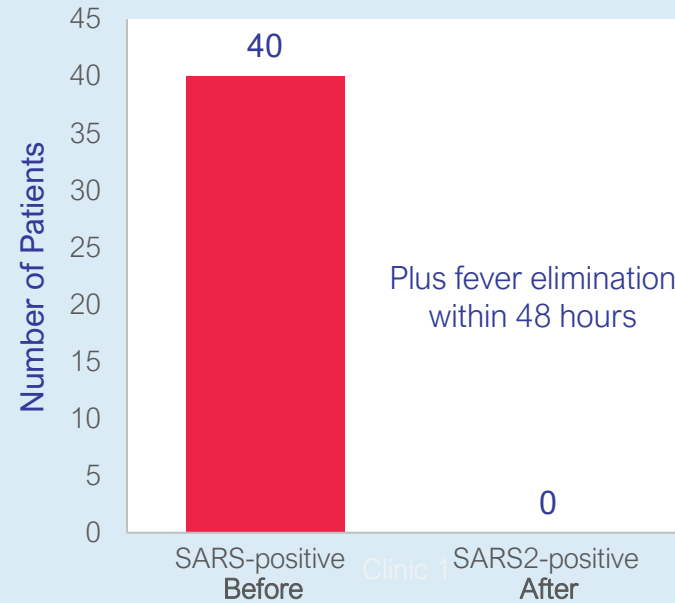
# Enterprise use

## SARS-CoV-2 Elimination (wild clinical isolate)



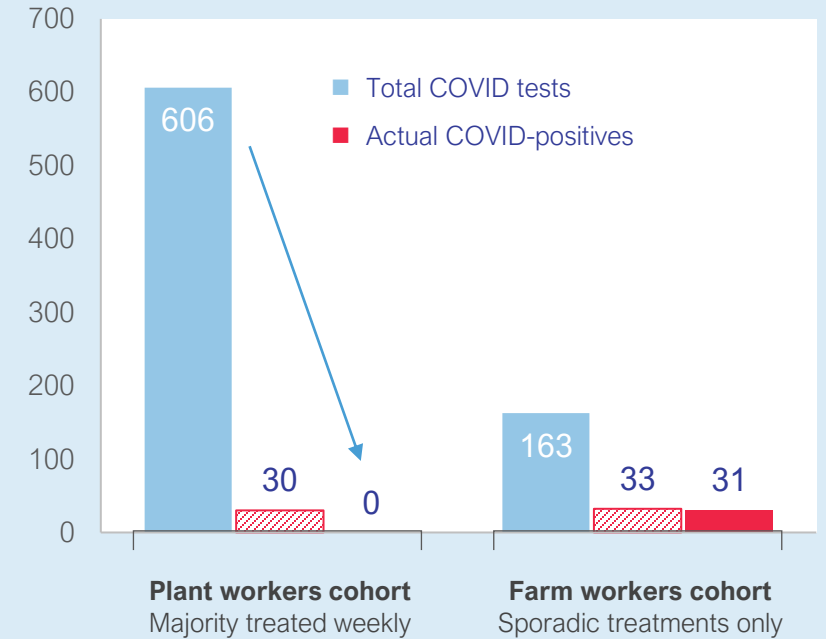
Source: Argemi, Merdoui, et al, Center for Applied Medical Research, BSL 3, University of Navarre

## Nasal Viral Load Eliminated (SARS2-positive patients treated with Steriwave)



Source: Dr. Jack Kolenda, Breathe Easy Canada Clinic

## Real-world Enterprise Impact (major Canadian meat processor, 45,000 treatments, 1/week)



Source: Drs. Richard Rusk & Judy Hodge (25 weeks, 2020)

# Operational Highlights 2021



Onboarded qualified  
FDA drug manufacturer



Completion of 4 trials  
demonstrating effectiveness  
vs. SARS-CoV-2



Increased enterprise adoption  
of Steriwave™ for prevention  
of COVID-19



Additional Canadian hospital  
deployments of Steriwave for  
SSI suppression



4x increase in  
manufacturing capacity  
and output



Expanded Ondine's  
Board of Directors

# Board with Deep Sector Experience

## EXECUTIVE BOARD MEMBERS



**Carolyn Cross**  
CEO and Chairman



**Nicolas Loebel**  
President and CTO



## NON-EXECUTIVE BOARD MEMBERS



**Craig Tooman**



**Simon Sinclair**



**Jean Duvall**



**Mike Farrar**



**Junaid Bajwa**



**Jean Charest**



# Poised for Advancement

## Expanded & Enhanced Capabilities



**Hired exceptional people**  
*with superb industry experience*



**Quadrupled throughput**  
*with our in-house production teams*



**Successful MDSAP certification**  
*of our Quality Management System*



**Lean Six-Sigma**  
*supplier management*

## Further Opportunities



**New enterprise customers**  
*in trial phases*



**SARS-CoV-2 suppression**  
*in at-risk patients*



**Expand nasal photodisinfection**  
*into ICU*



**Low-cost, high volume nasal light illuminator**  
*launch targeted Q4 2022*

# Financial Highlights

<b>(OBI:AIM)</b>	<b>Year-end 2021</b>	Year-end 2020
Revenue	<b>\$2.6m</b>	\$1.8m
Cash Balance	<b>\$29.9m</b>	\$0.6m
Debt	<b>\$0</b>	\$34.1m
Common shares outstanding	<b>194,584,524</b>	70,671,262

**\$132.2m market capitalization** (May 31, 2022)

# Building Value for Ondine Shareholders

- \* High growth US sales
- \* Pipeline products leveraging initial FDA IND
- \* International Sales

- \* FDA Submission
- \* Pilots & trials for additional indications & products
- \* FDA approval

- \* Complete Phase II trial
- \* Complete Phase III trial
- \* USA Market Launch Prep

## **SOLID FOUNDATION:**

- \* Proven Technology, Established Team, AIM/LSE Listing Symbol: OBI
- \* Business model & MDSAP production capabilities validated in Canadian hospitals
- \* HCA Relationship & Support
- \* 7+ products in pipeline leveraging existing regulatory filings & commercial relationships

A silhouette of a person standing on a rocky cliff with their arms raised in a gesture of triumph or gratitude. The background is a vibrant sunset sky with clouds in shades of blue, purple, and orange. The sun is low on the horizon, creating a bright glow. In the foreground, there are faint, stylized molecular or cellular structures.

**ondine**

Simple Solutions to Complex Infections

**Thank you**  
*Questions?*