# OmniVis

POWER OF THE LAB IN THE PALM OF YOUR HAND

# CHOLERA DETECTION IN WATER TAKES DAYS



# OMNIVIS DETECTS IN

OmniVis detects pathogens with an easy-to-use system with (1) a handheld hardware platform, (2) single-use disposable test kit stable for 2 years at room temperature, and (3) data management portal that work seamlessly together to detect diseases rapidly and affordably.



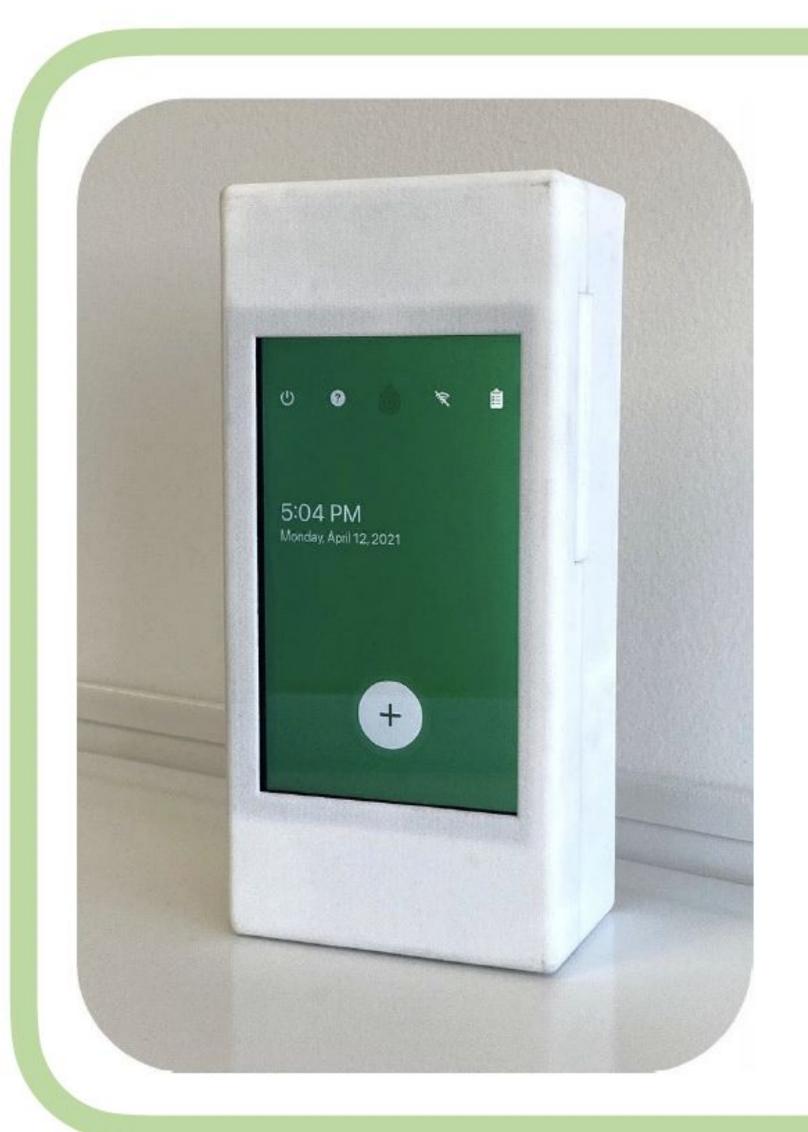






A TEST ANYONE CAN USE ANYWHERE IN THE WORLD.





## HARDWARE

Acts as portable lab

Microscopy and heating on-platform

Single-time purchase - used for every test

30 minute test





## TEST KIT

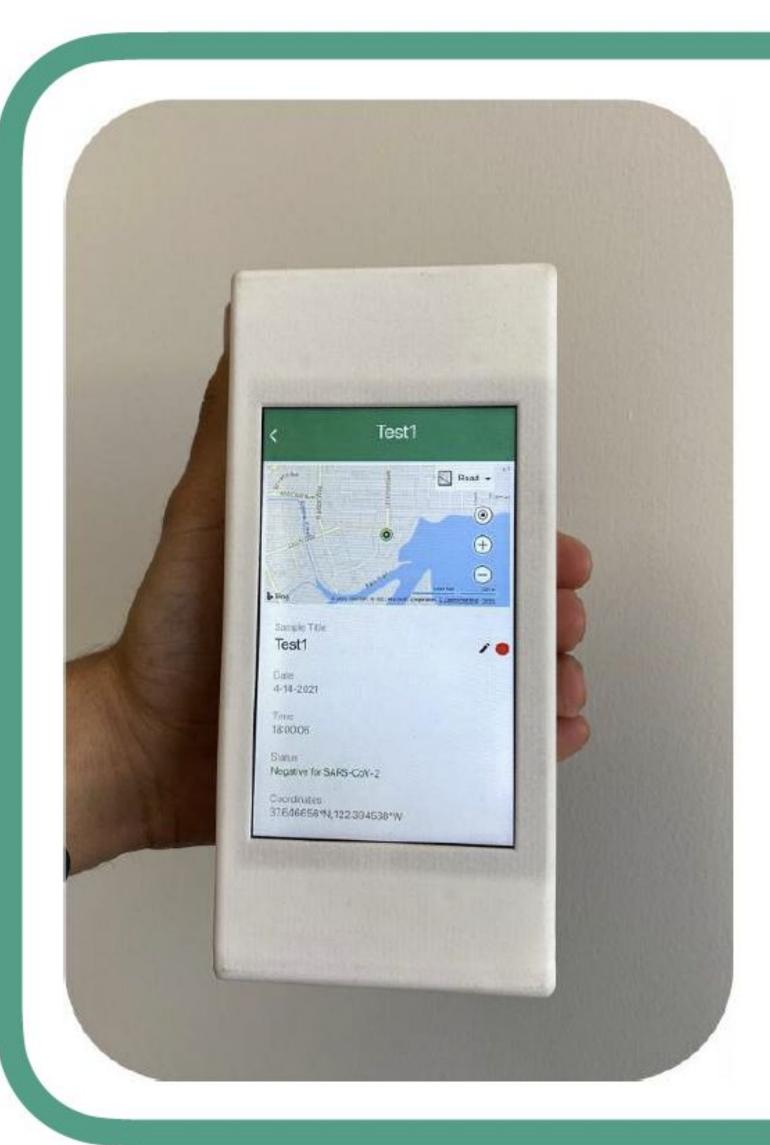
Holds liquid sample for testing

Temperature stable reagents

What we image and analyze

Single-use: disposable





### DATA

OmniVis application

Proprietary detection algorithms

Easy-to-use instructions and progression screens

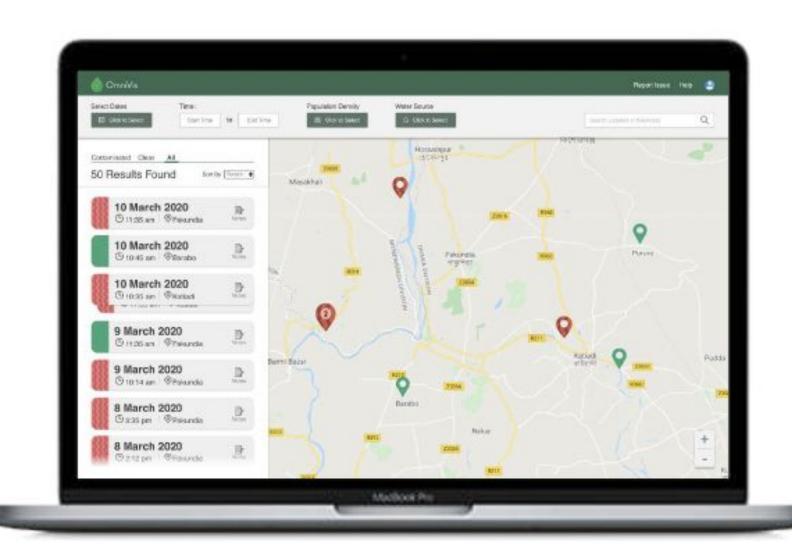
Provides result, GPS, time-stamp

Automatically offloads data to a specific cloud-based portal

Yes or No - Result



### CLOUD PORTAL



Links to OmniVis application

Unique log-in for organizations and field users

Aggregation and monitoring of outbreak data

Knowledge of where to pinpoint resources

Cost included in diagnostic purchases from businesses





## IMPACT

2.9 million cases each year. 95 000 deaths each year.

Each cholera patient needs 6.4 litres of ringer lactate => Huge impact on logistics. Cholera should be PREVENTED, before it gets cured.

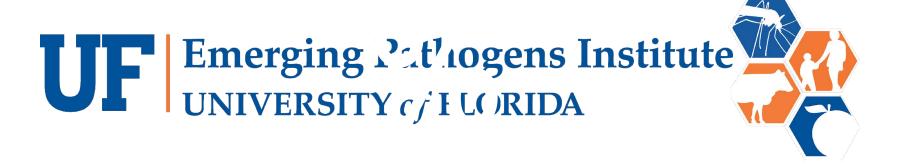
Prevent the spread in endemic regions.

Detect contamination during emergencies.



#### A worldwide effort to eliminate Cholera

#### LOIs, Pilot Studies & Customers



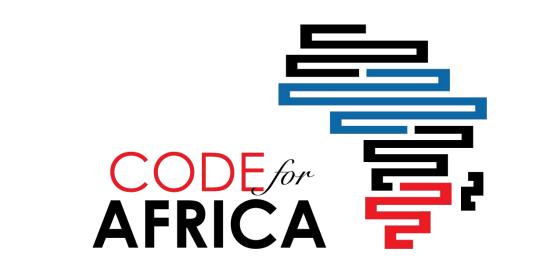
Cholera lab and water testing in Haiti







Largest cholera hospital



Africa sensors initiative



UNICEF DRC







# Projects

- User study with icddr,b 2019
- Scientific Device study with icddr,b 2022.
- Scientific Device study with CfA, 2022.
- Pilot study with UNICEF in DRC, 2022.
- GTFCC, bought devices in 2022.



# Scientific Papers

- Usability of Rapid Cholera Detection Device (OmniVis) for Water Quality Workers in Bangladesh: Iterative Convergent Mixed Methods Study.
- 2. A smartphone-based particle diffusometry platform for sub-attomolar detection of Vibrio cholerae in environmental water.
- 3. Particle Diffusometry: An Optical detection method for *Virbrio cholerae* presence in environmental water samples.

#### THE OMNIVIS INNOVATION



PORTABLE • Handheld - test anywhere, any time

UNIQUE MEASUREMENTS · Viscosity-based

RAPID • Result within 30 minutes of data collection

COST-EFFECTIVE • \$1000 device \$10 test kit

AUTOMATED • Removes user result interpretation

DISEASE AGNOSTIC • Scalable and plug-and-play

LOCATION SPECIFIC . GPS and time-tracking



# Working with OmniVis?

- 1. Interested to pilot the solution? Email us.
- 2. Can you help OmniVis out with a Letter of Intent? Email us.
- 3. Do you want to buy the solution? Ask for a quote.
- 4. Do you want to test the product for 30 days? Ask for a quote.
- 5. Interested in our peer-reviewed scientific papers? Email us.

#### Contact:

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# Omni Vis

Appendix



# Advantages

- 1. Easy scalable and quick turn around times.
- 2. No cold chain logistics needed.
- 3. Shelf life Test Kits 2 years in room temperature.
- 4. No training required for usage.
- 5. Confirmed specificity, accuracy, sensitivity by icddr,b.
- 6. Predictive modeling Predicting when and where outbreaks will occur.

#### OVERVIEW OF TECHNOLOGY



Our detection device combines two technologies to detect pathogens.

#### LAMP

- (RT-) LAMP for pathogen
- 6 primers to provide assay specificity
- Isothermal for low power draw for portable device
- Targeting unique gene
- <30 minute assay</p>

#### PARTICLE DIFFUSOMETRY

- Detects viscosity change from hybridized DNA
- Measures particle Brownian motion with image processing
- Highly sensitive detection method and novel approach
- 30 second recording
- 8 second processing time

# Questions?

Contact info@omnivistech.com

# OmniVis

www.omnivistech.com