



# Water-testing for Contamination Goes Portable

Detecting infectious disease at its source can save millions of lives



## Epidemics are Preventable

With advanced technology now available, infectious disease is no longer an inevitability. Especially when one of its greatest sources—fecally contaminated water—is detectable and avoidable. Finding a simple, reliable and portable test that can be administered at water sources anywhere is the goal of this new Gillings Innovation Lab.

## What is Required?

- **Lab On Site**

A non site-specific system for water-testing—one that does not rely on sophisticated equipment, modern infrastructure or even electricity.

- **Lab in a Box**

An easily transportable, self-contained testing apparatus.

- **Lab on a Budget**

A system that is affordable, even for the poorest of communities.

- **Lab Reliability and Ease of Use**

A series of simple fecal microbe tests (as reliable as current standard tests) that local people administering them can use effectively without advanced training in environmental microbiology or water quality analysis.

## What is the Timeline?

The urgency of this project is measured by the mounting death-toll world-wide resulting from infectious disease. Team members anticipate a test could be available in about two years.

## Leadership



**Mark Sobsey, PhD**, Kenan University Distinguished Professor of environmental sciences and engineering, UNC Gillings School of Global Public Health, observes, “We have the technologies; now it is a matter of finding ways to get them into communities and households, where people can use them effectively and sustainably. This project has the potential to save many, many lives.”



### GOAL

To develop and evaluate portable field tests for fecal contamination in water.

### PARTNERS

NOAA Center for Coastal Environmental Health and Biomolecular Research; Resource Development International, Cambodia; and universities in Puerto Rico, South Africa, and South Korea.

## IMPACT!

### Saving Lives

Infectious diseases resulting from water contamination—diarrhea, dysentery, cholera, enteric fevers and infectious hepatitis—kill over 1.6 million per year and make billions of other people sick. The goal is to make testing systems simple, affordable, reliable and available to those who need them most.

