

# DMI wins Nokia Sensing X Challenge with handheld medical device

November 12 2014, by Bob Yirka

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Credit: [sensing.xprize.org](http://sensing.xprize.org)

Officials with the Nokia Sensing X Challenge have announced the second grand prize winner in their competition—DNA Medicine Institute (DMI) has won for its cutting edge medical testing device, the rHEALTH X. The team has received \$525,000 in prize money and an enormous amount of publicity and prestige.

The Reusable Handheld Electrolyte and Lab Technology for Humans (rHEALTH) X is a portable handheld device that can currently conduct up to 22 lab tests (up to the FDA gold standard) from a single drop of blood. In accepting the award, representatives with DMI said that while

winning the prize is great, their real objective is to bring modern medicine to the billions of people who currently have little access to medical care.

The [lab tests](#) done by the X run the gamut, from tox screening, to looking for signals in the blood that indicate diseases, to discovering the presence of viruses, such as flu or Ebola. To allow for testing with such a small device, the researchers developed new technology to test blood samples—it relies on nanotechnology and optics. The testing surface is seeded with many nano-sized test strips, each of which mix with and soak up material found in the blood. Each strip is then lined up and passed in front of a laser which is used to determine what material is in it. Findings are stored and displayed, allowing non-medically trained people to make their own diagnoses. The device also comes with a Bluetooth enabled patch to be applied to the skin which can provide respiration, heart rate etc. to a person on their smartphone.

The X is one of three similar devices created by DMI, the other two perform more, or different kinds of tests and are aimed at research or diagnostic facilities. Another similar device by the company is also vying for [prize money](#) in the Qualcomm Tricorder X Prize—a competition to see who can create a device similar to the tricorder of Star Trek fame.

The X will have to pass FDA approval before being sold in the United States, and it's still not clear just how much one might cost. But that may be moot, as the team clearly wishes to have their [device](#) used in places where people have few other options, such as parts of Africa, India, South America and Asia.



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