New diagnostic health instrument

Imagine if clinics in developing countries were equipped with an inexpensive yet durable tool that could help medical personnel identify and diagnose a variety of deadly diseases like Malaria, Chagas disease, or Leishmaniosis? For millions of people around the world waiting to be diagnosed and treated, such a tool could be a life-saver.

Manu Prakash, a professor at Stanford University and his students have developed a microscope out of a flat sheet of paper, a watch battery, LED, and optical units that when folded together, much like origami, creates a functional instrument with the resolution of 800 nanometers – basically magnifying an object up to 2,000 times.

Called Foldscope, the microscope is extremely inexpensive to manufacture, costing between fifty-cents and a dollar per instrument. And because the microscope is assembled primarily from paper and optical components the size of a grain of sand, it is virtually indestructible.

Foldscope also differs from the microscopes typically found in science labs because it's not only portable, but it also has the ability to project an image on any surface, allowing a larger group of people the ability to look at an image simultaneously.