**Transcript**

***Dr Conor Hogan – Mobile phone based sensors for the developing world***

Chemical measurement is something that’s become vitally important in our society. It’s something that is important for controlling manufacturing processes. It’s important for getting a handle on the identity and concentration of species in our environment, so environmental monitoring. But I suppose most importantly it’s become very, very important in the area of health care for medical diagnostics. But there’s a problem with that. It’s had a huge impact on the area of health care but it’s had that impact mostly in the Western world. Unfortunately there’s a huge segment of the population of this planet that it has no impact on for one simple reason and that’s that it’s too expensive and what we propose to do, what we are trying to do is to make chemical measurement, specifically make medical diagnostics extremely inexpensive.

There’s two ways you can make medical diagnostics inexpensive. Number one you can make the materials that you make the sensor out of less expensive and we are doing that by switching over from traditional materials such as silicone, glass and plastic over to materials such as paper. Paper is so ubiquitous and so cheap and so easy to work with that it brings down the cost of these sensors to a very, very small level. Now the second way to make diagnostics cheaper is to do away with the instrument. All diagnostics requires a scientific instrument of some sort to measure a signal. So typically a blood sample or a urine sample or whatever is taken, it’s put into a sensor, the sensor is inserted into an instrument and a measurement is made. And that’s a key part of, that’s an important contributor to the overall expense. So our idea, part of our idea is to have instrument free measurements using one of these – using a mobile phone.

The key outcome we hope to achieve is as I said is to make medical diagnostics ridiculously inexpensive in order that it will have an impact in the developing world.