

MEDICAL

Low-cost bioactive paper detects blood types in under a minute

By Nick Lavars
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Manolios tells us that the device costs less than a dollar

Determining a blood type to ensure compatibility ahead of a transfusion isn't straightforward at the best of times, but in regions of the world where proper medical equipment is unavailable it is nigh on impossible. A new, bioactive piece of paper promises to change that, however, with the ability to analyze just a few drops of blood and identify somebody's blood group in as little as one minute.



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Australian company Haemokinesis has partnered with Melbourne's Monash University in developing the ultra low-cost medical device. The Group Legible Immunohematology Format (GLIF) card features a special material and a clear window for the sample to be delivered. As Haemokinesis CEO Jim Manolios explained to Gizmag, the material reacts with the antigens to quickly detect the subject's blood group as A, B, AB or O.

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"The antisera is impregnated, and the paper is coated with bioactive material," said Manolios. "Drop whole blood into the window, wait a minute and then wash away any unbound red cells. What you are left with is the answer, it literally tells you the answer."

Manolios wasn't willing to delve any further into the patented technology and bioactive components of GLIF, but given that it uses low-cost materials and low-cost manufacturing, he is very optimistic about the opportunities it could open up in the developing world.



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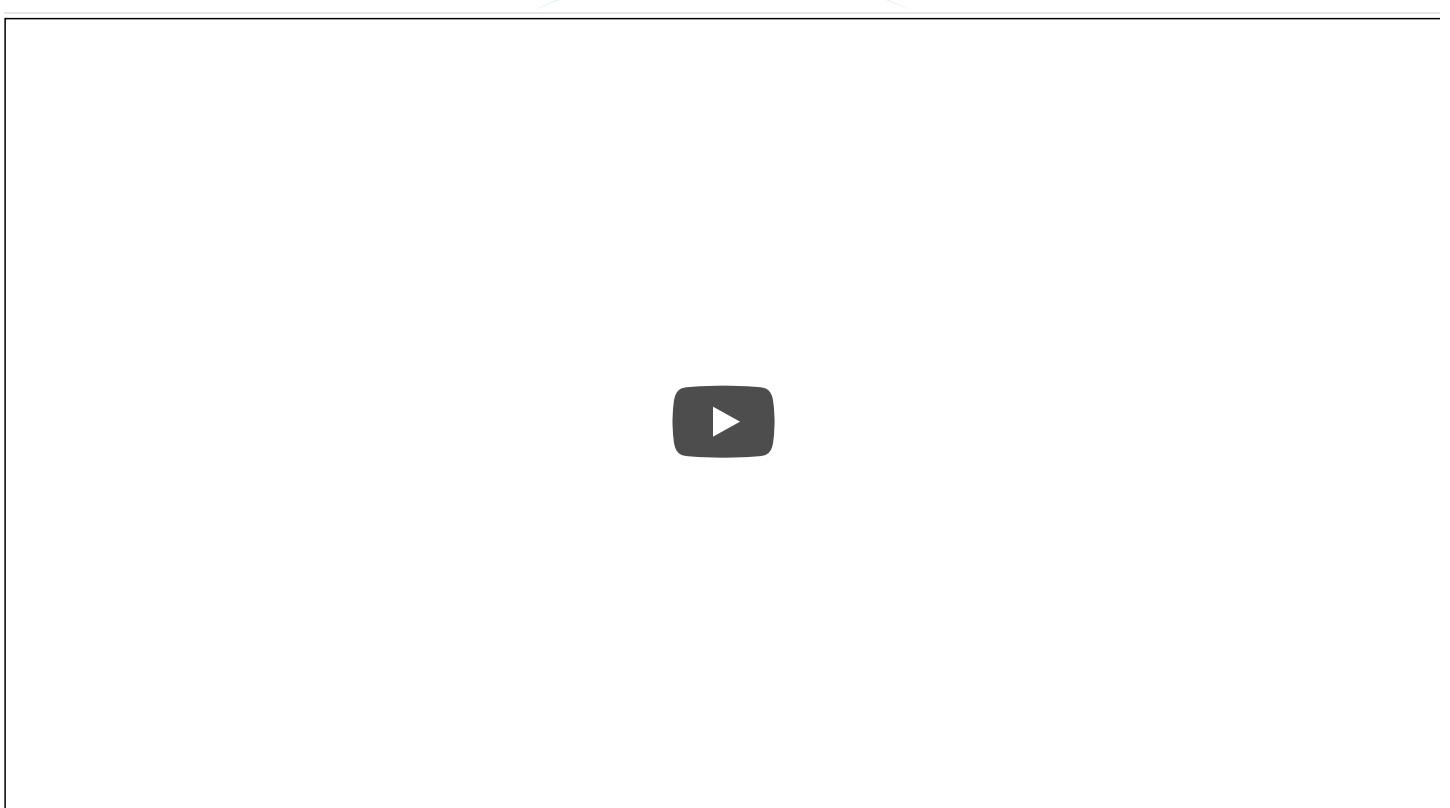
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"You could use it, for example, in a situation where there's a pregnant woman and no facilities," he says. "She could bring in her relatives and then the ones that were compatible could do a donation and transfusion if she needs it."

Manolios tells us that the device costs less than a dollar and will be available by mid-2016. He also says it is the first of what he hopes will be a line of products, the second of which will identify rarer blood types that are difficult to test for.

"It will be early 2017, we've got all the components we've just got to turn it into the one machine."

The video below shows the GLIF in action.



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