

## Dr Tim Dafforn

Dr Tim Dafforn of the School of Biosciences describes, in 60 seconds, his research into the creation of a handheld disease detector.

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My name is Tim Dafforn and I work in the School of Biosciences at the University of Birmingham.

I work on new methods to detect pathogens and infections. Now how do we do this? Well, interestingly, we take our inspiration from Italian cooking and, more particularly, spaghetti and meatballs. You may have noticed, if you've ever cooked spaghetti, that if you stir spaghetti in a pan it aligns in an ordered way and if you add meatballs that alignment disappears.

Now we use the same thing, only we have a reagent that detects pathogens and infections that is like spaghetti but a million times smaller. Now we align that reagent and we get a signal. Now if we add our pathogen, which is like a meatball, that mucks up the alignment and we can detect that.

What does this mean for the future? Well, ideally, what we are looking at doing is developing an instrument about the size of an iPhone that will be able to detect pathogens using this method, pathogens like e. coli and can be used by your doctor in his GP surgery. So when you come along with an illness he can detect it, understand what it is and give you the right drugs.

[Dr Tim Dafforn's profile \(http://www.birmingham.ac.uk/schools/biosciences/staff/profile.aspx?ReferenceId=9224&Name=dr-tim-dafforn\)](http://www.birmingham.ac.uk/schools/biosciences/staff/profile.aspx?ReferenceId=9224&Name=dr-tim-dafforn)

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