

Sherlock, DNA detective, makes diagnosis elementary

A DNA-hunting tool called Sherlock which costs only 50p can not only identify a wide range of infections but can even determine the best drugs to treat them, scientists have found.

The molecular scout has also sniffed out cancerous cells and worked out what kind of tumour they come from. Independent experts said that it could revolutionise the diagnosis of diseases, which is often laborious, expensive or unreliable. One described the idea as "magical".

Doctors need a quick and cheap way of telling whether patients are ill because of a bacteria or a virus so

that they can cut down on the over-prescription of antibiotics.

Sherlock, an enzyme which can be "programmed" to light up when it identifies a given genetic code, is the brainchild of a team led by Feng Zhang and James Collins, bio-engineers at the Broad Institute, in Cambridge, Massachusetts.

In tests, the results of which are published in *Science*, the team rapidly and accurately distinguished zika from dengue, and *E. coli* from *Pseudomonas aeruginosa*, that can cause pneumonia and sepsis. Now Sherlock will undergo clinical trials.

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