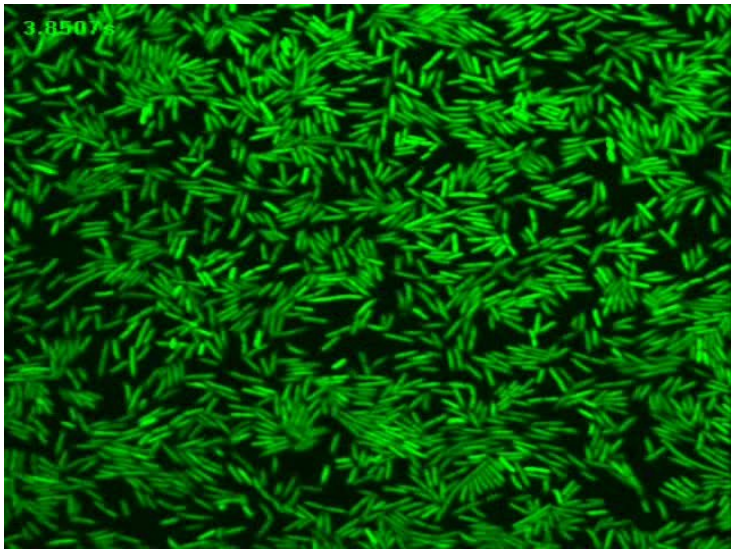
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Stanford team develops effective imaging technique for TB

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The technology relies on a newly created two-piece fluorescent probe.



A research team at Stanford University School of Medicine has developed an imaging technique that can diagnose live tuberculosis (TB) in an hour and help monitor the efficacy of treatments.

The new method is easier and cheaper to carry out than current methods, meaning the technology could be useful in cash-strapped healthcare systems. It requires the use of fluorescent microscopes, which nearly all hospitals have, and no special training.

The technology relies on a newly created two-piece fluorescent probe. The probe is combined with the spit sample and is activated when it comes in contact with TB bacteria. When one part of the probe detects TB it then glows and the second part localises the glow to the bacterium. This concentrated fluorescence allows researchers to track the distribution of the bacteria in infected host cells.

The probe can also determine the appropriate drug for a patient by showing which bacteria are still alive in the patient sample.

The research team hopes that the technique could help scientists develop new TB drugs for different strains of the disease. The team is planning to test the probe and obtain approval from the US Food and Drug Administration (FDA).