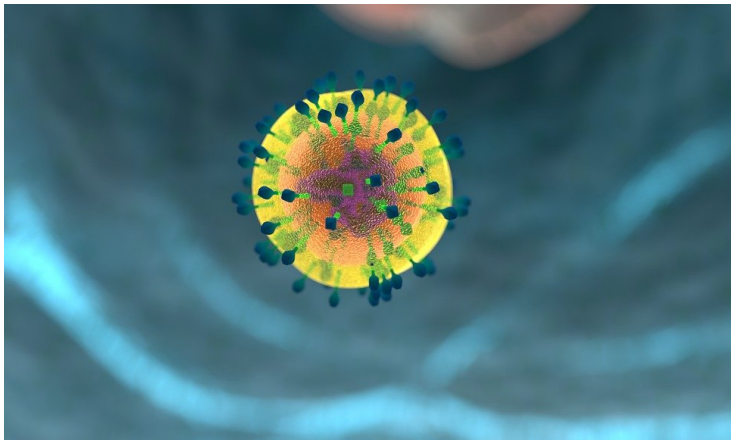
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Researchers shed new light on influenza detection

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Researchers at the University of Notre Dame have discovered a way to make influenza visible to the naked eye.

By engineering dye molecules to target a specific enzyme of the virus, the team was able to develop a test kit that emitted fluorescent light when illuminated with a hand-held lamp or blue laser pointer.

Scientists used test samples that mimicked that of an infected patient, and spiked the samples with the enzyme, called neuraminidase, which had been purified from flu virus. The samples emit red fluorescent light as a positive indication of the influenza virus. Blue fluorescent light signals a negative result. The same process also allowed scientists to determine which of two approved antiviral drugs (Relenza and Tamiflu) would be a better treatment option for the individual patient.

While still a prototype, researchers believe that with optimization the diagnostic could be developed to be used in point of care clinics or the home environment for a rapid, easy to interpret test for the presence of influenza.

The study, which received funding from the National Science Foundation and Notre Dame's research initiative, Advanced Diagnostics and Therapeutics, focused specifically on fluorescence detection of the virus and efficacy of the two inhibitors.