

Scientists develop blood test to detect liver damage

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Scientists from University College London (UCL) in collaboration with the University of Massachusetts in the US have developed a new blood test to identify liver damage within one hour. The test is designed to detect the damage even before the appearance of symptoms and so addresses the need for the early diagnosis of liver diseases.

Validated in clinical samples, the test was found to differentiate samples from healthy individuals and those with different degrees of liver damage. The University of Massachusetts researchers devised a sensor that uses polymers coated with fluorescent dyes, which bind to blood proteins and change in brightness and colour based on the composition of the sample.

When tested using small blood samples from 65 subjects, the sensor was able to detect different protein level patterns in their serum. The blood test demonstrated the capability to distinguish fibrotic samples from healthy ones 80 per cent of the time, compared to 60 per cent in the case of differentiating mild-to-moderate and severe fibrosis. With plans for assessment in larger populations, the team intends to refine the test's effectiveness.