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IISc scientists design a new tool for detecting malaria

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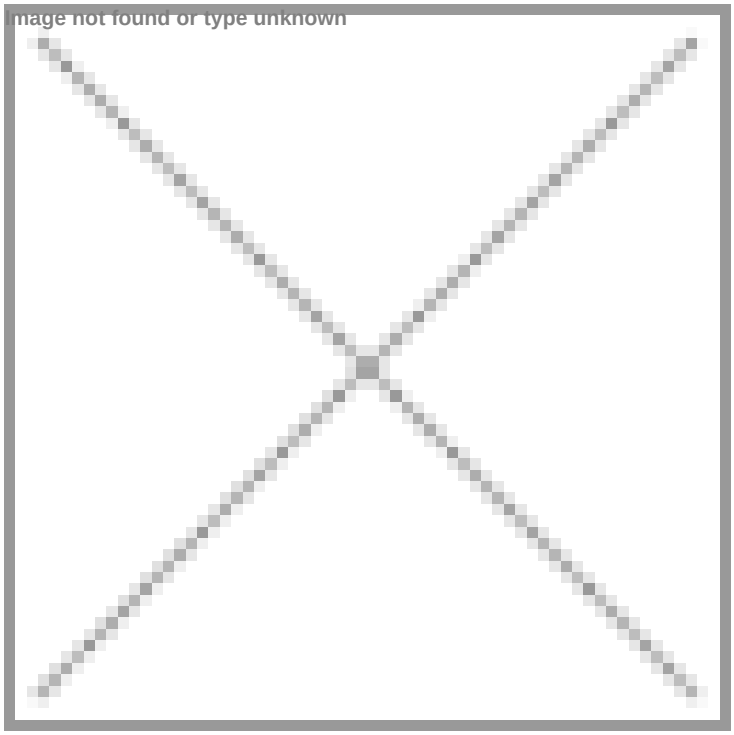

Scientists at the Indian Institute of Science (IISc), Bengaluru have developed a new diagnostic tool for early detection of malaria.

This new tool can detect the disease even in the red blood cells that do not themselves host the parasite but lie near the infected ones. The red blood cells that lie close to the infected ones appear rigid much like the affected ones and this helps in easy diagnosis.

Scientists have used a tweezers technique in which laser beams are made to focus at the micron-sized red blood cells under a microscope and then imaged using a video camera. The team observed that the motion frequency of the infected cells was different than that of the normal cells.

The team also observed that when the infected cells became rigid, they took about 1.33 seconds to fold whereas normal cells took only 0.8 seconds. The researchers thus concluded that a measure of folding time can also be used to determine whether a cell is infected.

The researchers believe that the tweezers technique can be used as a general screening tool for all stages of malarial infection. The technique is very easy and does not require trained personnel as it is fully automated.