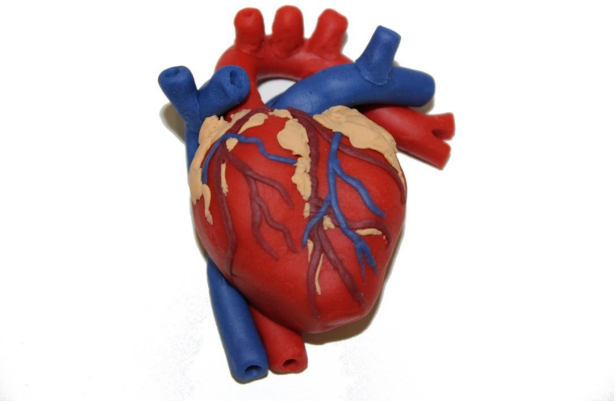
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Researchers in Japan develop a color device for the heart

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The researchers grew heart cells on the polymer gel and observed that the beating action of the heart cells caused the structural color to change.



A group of researchers from Kyoto University's Institute for Integrated Cell-Material Science (iCeMS), in collaboration with researchers from Semmelweis University and Kyoto University Medical School in Japan have produced a butterfly wing-inspired structural color device for measuring the beating of heart cells, which they hope will help speed up the process of pharmaceutical testing.

Like the wing of a butterfly, this device produces structural color from micro-patterns developed on the surface of a polymer gel.

The researchers then grew heart cells on this polymer gel and observed that the beating action of the heart cells caused the structural color to change. The color changes could be detected easily with low power microscopes. The researchers were able to demonstrate the practical utility of their new device by monitoring the beating pattern of heart cells in response to drugs.

During pharmaceutical development, screening of drugs with different cell types is essential to weed out potentially dangerous drugs before they are tested on humans. The device developed in this study allows the beating of cells to be measured easily in a non-invasive way, thus facilitating high throughput testing.