

# Video of mini hearts and livers for "Body on a Chip" project update

April 21 2015, by Karen Richardson

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A confocal image of a cardiac organoid with immunofluorescence showing VEGF (green). This marker indicates that the structure may be becoming vascularized, which allows for better culture health. It also shows the individual cells (blue = nucleus). Credit: Wake Forest Baptist Medical Center

As part of a "Body on a Chip" project funded by the Defense Threat Reduction Agency, scientists at Wake Forest Institute for Regenerative Medicine, a part of Wake Forest Baptist Medical Center, in collaboration with partners from around the country, are developing miniature hearts, livers, blood vessels and lungs that will be used to predict the effects of chemical and biologic agents and used to test the

effectiveness of potential treatments.

The organoids will be connected to a system of micro-fluid channels and sensors to provide online monitoring of individual organoids and the overall organoid system. This approach has the potential to reduce the need for testing in animals, which is expensive, slow and provides results that aren't always applicable to people.

A light microscopy image of a cardiac organoid shows that it is an aggregate of cells. Credit: Wake Forest Baptist Medical Center

**More information:** To learn more about the "Body on a Chip" project at Wake Forest Baptist, read the news release that announced the project in 2013: [medicalxpress.com/news/2013-09 ... llion-body-chip.html](http://medicalxpress.com/news/2013-09 ... llion-body-chip.html)

Provided by Wake Forest University Baptist Medical Center

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