

Research survey evaluates attitudes toward microfluidics-based cell culture

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Organ-on-chip and 3D cell culture technology have been highlighted as promising ways to ease the cost and inefficiency of the drug development process. A wide range of technology in this arena has been developed; however, what comprises an 'ideal' 3D culture model has not been defined and translation has proven difficult.

A new article published in *Future Science OA* from Shery Huang and colleagues at the University of Cambridge (UK) has attempted to address this issue by determining the ideal qualities of such [technology](#) from the point of view of the end users, the biomedical community.

"Although a plethora of microfluidics-based [culture](#) models has been developed...the adaptation of these models to address biologically focused research questions is sparse," noted the authors.

The group designed a survey to assess acceptance of microfluidics-based 3D cell culture systems. Their results demonstrated a positive attitude towards the technology, although a gap remains between what is desired and what is available. In particular, the biomedical community required systems balancing complexity, user-friendliness, physiological relevance and controllability.

"In order to become a widely accepted tool in fundamental bioscience and pharmaceutical industry, 3D culture models have to find suitable research questions to address and impart tailored complexity, while overcoming drawbacks such as poor compatibility, relatively low

throughput, limited functionality and lack of a standardized metric in cross-system comparison," concluded the authors.

They hope that the survey results can provide insight for entrepreneurs interested in the commercialization of these systems.

More information: Ye Liu et al, Microfluidic on-chip biomimicry for 3D cell culture: a fit-for-purpose investigation from the end user standpoint, *Future Science OA* (2017). [DOI: 10.4155/fsoa-2016-0084](https://doi.org/10.4155/fsoa-2016-0084)

Provided by Future Science Group

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