

‘Cruelty-free’ lab-grown mini-organs could dramatically reduce need for animal testing

The traditional way of testing vaccines involves injecting them into animals and waiting weeks or months for the result. When developing a whole new class of vaccine or focusing on a new target, scientists often need to evaluate many vaccine candidates, requiring numerous animal studies.

As an alternative, researchers have developed a new testing platform that encapsulates B cells into miniature “organoids” to screen vaccines quicker and greatly reduce the number of animals needed. This development is detailed in a [study](#) published in scientific journal *ACS Central Science*, published by the American Chemical Society.

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To construct organoids, the researchers isolated B cells from mouse spleens, added cellular signaling molecules and structural components, then encapsulated everything in a synthetic hydrogel matrix. Next, they prepared conjugate vaccine candidates targeting the bacterium responsible for tularemia, or “rabbit fever,” for which an approved vaccine does not currently exist.

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“The barriers to replacement are not scientific—they are policy, educational, and psychological,” [researcher Elizabeth] Baker concludes. “Our team and many others are working to address these challenges so that science will continue moving away from animal use.”

[This is an excerpt. Read the original post here](#)