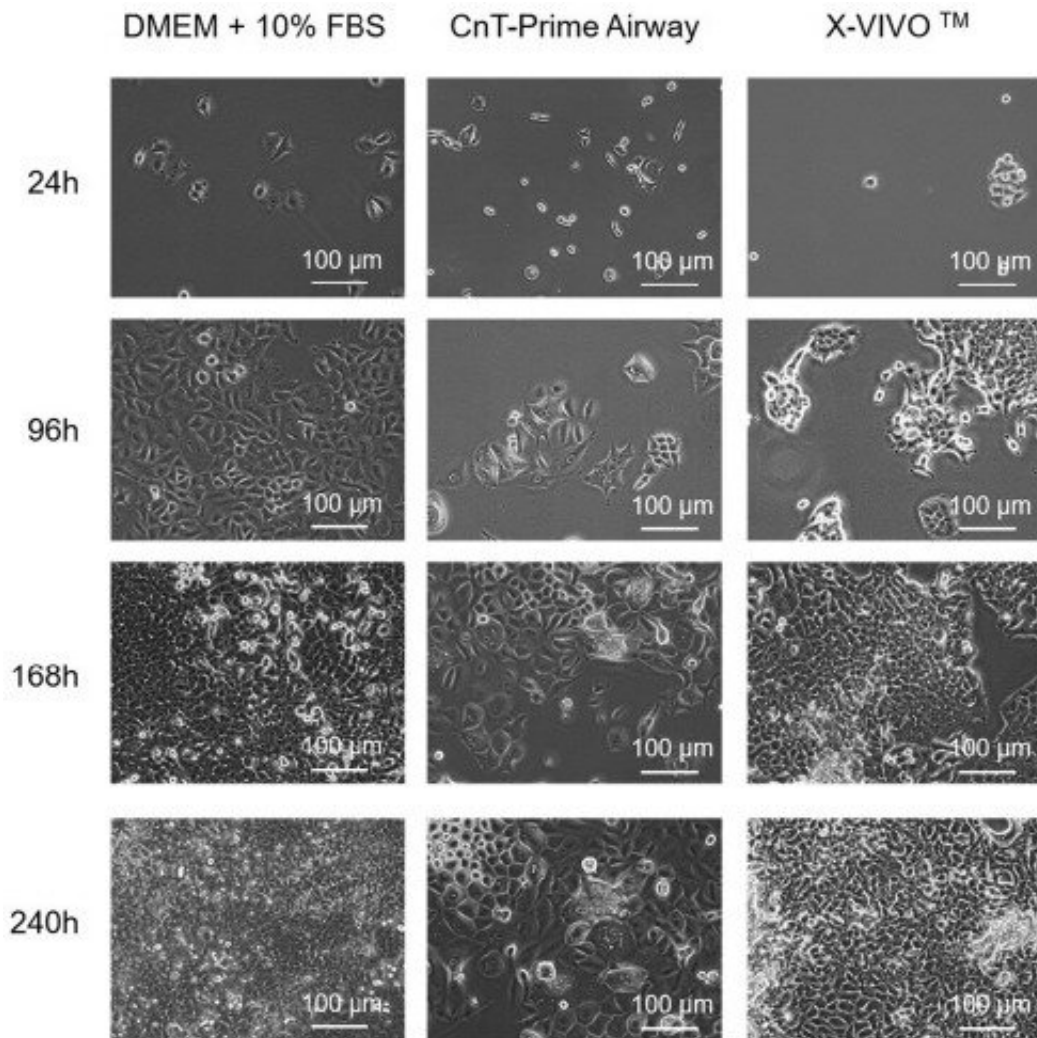


# Scientists successfully transition cell line to be completely animal-free

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Microscopic observations of A549 cells at 24 h, 96 h, 186 h, and 240 h cultured in DMEM +10% FBS (Control), CnT-Prime Airway, and X-VIVO™ media. [Olympus CKX53 light microscope, objective 20×, magnification 200×, temperature 20°C, cell culture imaging medium, XCAM 5.0 MP camera]. Credit: Aline Chary et al, *Toxicology in Vitro* (2022). DOI:

10.1016/j.tiv.2022.105423

A new paper by PETA Science Consortium International e.V. and the Luxembourg Institute of Science and Technology shows how to improve the relevance and reproducibility of research by replacing media containing serum extracted from the blood of unborn calves with animal-free media.

An estimated 1.8 million unborn calves are killed worldwide to produce fetal bovine serum (FBS)—an undefined mixture of molecules, including hormones, proteins, and [growth factors](#) obtained from the blood of fetal calves after their mothers are slaughtered for food. FBS, which is used in laboratories to help grow [cells](#) in vitro, is a source of variability, contributing to the reproducibility problem in research. Scientific organizations such as the Organisation for Economic Co-operation and Development and the European Union Reference Laboratory for Alternatives to Animal Testing have encouraged the transition from using FBS to using animal-free, chemically defined media.

The paper, published in *Toxicology in Vitro*, describes the transition of A549 cells, a human lung cell line commonly used in research, to cell culture media without FBS or any other animal-derived components. The success of this project sets a precedent for making the same transition for other cell types and has far-reaching implications for the field of in vitro research.

"Our study demonstrates the feasibility of using animal-free media, and it provides a template that can be replicated to transition other [cell types](#) to serum-free media," says Science Consortium President Dr. Amy Clippinger. "The use of animal-free media has numerous advantages,

and we encourage researchers to invest in this opportunity to increase the quality and reproducibility of studies."

**More information:** Aline Chary et al, Maximizing the relevance and reproducibility of A549 cell culture using FBS-free media, *Toxicology in Vitro* (2022). [DOI: 10.1016/j.tiv.2022.105423](https://doi.org/10.1016/j.tiv.2022.105423)

Provided by People for the Ethical Treatment of Animals (PETA)

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