

Unique features of PhysioMimix™ from CN Bio

Organ-on-a-Chip assays are being hailed as the key to faster, more accurate drug development and precision medicine. They provide a better understanding of disease and improve the development of new treatments. They do this by providing precise, physiologically relevant preclinical data by studying human cells and tissues, without the need for expensive and time-consuming animal studies.



• *Off-the-shelf solution*

• *Compatible with existing equipment*

• *Generate results quickly*

• *Quick set-up*

PhysioMimix™

A CN BIO INNOVATION

Organ-on-Chip studies allow scientists to zero in on drug targets, toxicity mechanisms and drug-drug interactions, moving drugs into clinical trials and avoiding costly failures.

Many Organ-on-Chip studies are available only via a service-based offering, or require large, complex installations accompanied by in-depth training and ongoing specialist expert assistance from the vendor.

PhysioMimix™ from CN Bio provides an off-the-shelf solution which allows researchers to set up assays and generate results quickly. Standard laboratory skills are all appropriate to set up equipment, culture micro-tissues that mimic the structure and function of human organs and tissues and run a wide range of assays and experiments.

Full list of features overleaf

Features of PhysioMimix™ which make it unique with regard to other Organ-on-Chip systems

- **Lab benchtop Ready:** PhysioMimix™ is around the size of a small incubator or fridge, making it portable and suitable for installation in most lab spaces, including smaller benchtop spaces.
- **Compatible with existing equipment:** including standard incubators. PhysioMimix™ does not require special instrumentation or equipment to be purchased.
- **Quick set up:** unlike more complex systems, PhysioMimix™ can be set up in less than an hour.
- **Open-well plates:** the PhysioMimix™ device and consumables allow technicians and scientists to seed and culture cells in-house. Its open-well plates are accessible through experiments for dosing, sampling and analysis.
- **Accurate Tissue Mimetics:** static tissue culture doesn't accurately recapitulate disease; a perfused system is necessary to provide accurate indications of a drug, chemical or other substance's toxicity and efficacy, and a detailed pharmacokinetic profile to guide further studies.
- **Compatible with off-the-shelf pre-formed tissues:** PhysioMimix™ allows researchers to introduce primary cells, stem cells or pre-formed tissues to create organ mimics.
- **Real-time monitoring of experiments:** PhysioMimix™ allows scientists to remove samples for analysis throughout an experiment, providing real-time monitoring of data and experimental progress. Monitoring includes biomarker assays, imaging to visualize cell morphology, cell migration and protein marker localization; but importantly experiments can continue to run.
- **Concurrent Organ Assays –** PhysioMimix™ supports the use-case to link two or more tissue systems using microfluidics. This assay provides highly valuable data which reveals how multiple organs interact and respond to stimuli.
- **"Set-and-Run" Perfusion:** PhysioMimix™ enables continuous oxygenation and automatically controls microfluidics; providing round-the-clock cell culture. Flow rates can be programmed, enabling long term experiments with minimal user input, and no shifts or overtime from scientists.
- **Compatible with Immunotherapies and Gene Therapies:** PhysioMimix™ supports assays for innovative human specific modalities such as antibody or gene therapies

CN Bio's Organ-on-Chip platform is currently being used by the Food and Drug Administration (FDA), the United States' regulatory body, and at leading pharmaceutical and biotech labs.

We'd be happy to tell you more about PhysioMimix™.
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