

BIO CELLX

AUTOMATED 3D CELL CULTURE. SIMPLIFIED.



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Your partner in 3D biology

CELLINK is the leading innovator of bioprinters, bioinks and technologies at the forefront of 3D cell culture, driving to a future where on-demand bioprinted human organs and tissues are a reality.

CELLINK is proud to be a part of the BICO family, working alongside premier companies in engineering, robotics, artificial intelligence, advanced genomics and bioprinting, leveraging the power of bioconvergence to unlock synergies and offer products and services that accelerate research.

Together, we can create the future of health.

JOIN THE BIO-CONVERGENCE REVOLUTION



INTRODUCING

BIO CELLX

The high-throughput, fully automated biodispensing solution that leverages BIOPOD (bioprinting on demand) technology with pre-set and pre-validated protocols to bring the power of 3D cell biology to your benchtop.



Easy to Operate

The platform leverages BIOPOD technology by combining a state-of-the-art instrument with pre-validated, built-in protocols and material mixing cartridges to offer a solution that is easier to use than any other system on the market, a plug-and-play user experience.



Effortless hydrogel extrusion

Each of the three cartridge stations offers precise temperature control ranging from 0°C to 60°C, allowing for hassle-free printing of ECM hydrogels and bioinks like Collagen, GelMA, and GelXA.



Automated bioink preparation

Cartridges enable the automated mixing of cells with hydrogels gently and homogeneously at the push of a button. This novel approach ensures high cell viability and automates neutralizing collagen.



Precise and reproducible

A high-precision positive displacement extrusion system provides reproducible results every single time, regardless of the dispensed material.



Designed for Your success



Pre-validated protocols

Developed by scientists for scientists, pre-validated protocols ensure consistent and reproducible 3D model generation, guiding users through every step of the workflow, from material selection to dispensing to suggested downstream analysis methods.



Sterility uncompromised

CELLINK's fully enclosed, proprietary Clean Chamber technology, combined with a patent pending de-lidding solution, ensures the sterility of the entire workflow when working on a benchtop in a laboratory environment.



High-throughput solution

By supporting microplates up to 384-well plates, the platform offers a perfect solution for drug discovery applications.



Nozzle auto-priming system

A patent pending system activates when the camera points at the nozzle tip, triggering an algorithm to automatically prime the nozzle ensuring the right droplet size.



Highly accurate, automated calibration

Highly accurate, automated calibration Ensures reproducible prints thanks to industry-leading auto calibration, which leverages a suite of sensors to accurately position nozzles for consistently optimal dispensing.

FROM BIOPRINTING TO BIODISPENSING

Further reducing the barriers to 3D cell culture for reproducible and fully automated workflows

Whereas bioprinters produce complex models, biodispensers create simpler models and droplets while greatly increasing throughput.

Biodispensing makes the creation of biomimetic models accessible to everyone. By focusing on droplets and simpler geometries, it ensures reproducibility and increases the speed at which models are created. Furthermore, biodispensing requires much less input from the user, allowing for an unparalleled plug-and-play experience.

01

FEATURES

Pre-validated protocols
Precise and reproducible
Plug-and-play experience

02

MODELS

Single-layer structures
Droplet in droplet
Droplet

03

MATERIALS

Collagen
GelMA
GelXA



BIODISPENSING AT THE PUSH OF A BUTTON

BIO CELLX Studio

Maximizing walk-away capabilities through the power of automation.

A brand-new, intuitive version of DNA Studio guides users through the entire process, from setting up the system to selecting one of the pre-set and pre-validated protocols. **No training required.**



The intuitive platform leverages BIOPOD technology (bioprinting on demand), combining a state-of-the-art instrument with pre-validated, built-in protocols and material mixing cartridges to offer a solution that is easier to use than any other system on the market.

HOW?





No coding experience needed

An intuitive user interface requires no prior coding experience.



No modeling required

Built-in 3D models mean no time wasted in CAD software.



Touchscreen optimized

It has never been easier to operate an interface with a gloved finger.



Flexible well selection

Selecting single wells or columns in a plate is as easy as swiping a finger.



From one to thousands of samples in one go

The interface will guide you through the process of filling multiple plates.



Multi-user enabled

Integration with MyCELLINK account allows the protocols to be used on multiple instruments.



Adjustable droplet size

Select the size of droplets in line with your goals and downstream analysis methods.



Camera view

Observe the samples as they get dispensed.

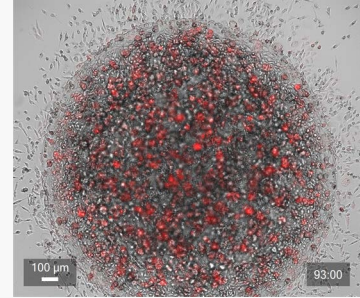


Application-specific biomaterials

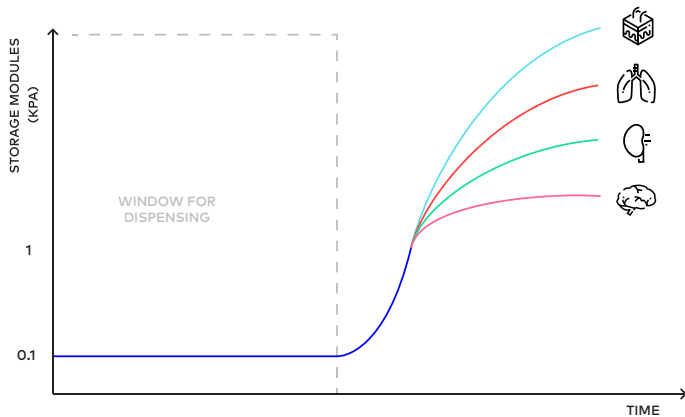
Careful consideration and evaluation goes into every biomaterial choice in the pre-validated BIO CELLX protocols. Scientists select and rigorously test workflows to maximize output from every biodispensing run.

Cell viability prioritized

Biomaterials are specifically tailored for the dispensing process to maximize cell viability after dispensing and streamline drug discovery workflows.



Clear spheroid formation of breast cancer cells after 5 days.



An illustration depicting how different storage moduli can be achieved after dispensing with a combination of biomaterial concentration and temperature changes.

High-throughput optimized

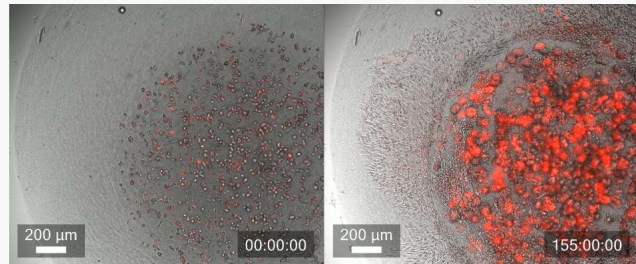
Leverage precise temperature controls to delay the self-assembly of dispensed biomaterials like TeloCol®-10. This extends the working window and increases the overall throughput of each run.

Defined construct stiffness

With temperature-sensitive (Collagen, GelMA and GelXA) materials, protocols include defined construct stiffness to more accurately mimic biomechanical properties.

In vivo biology, recaptured

ECM-based hydrogels provide the ideal microenvironment to effectively recapitulate *in vivo* conditions and enable cellular cues.



Breast cancer cells labeled with mCherry migrating to low concentration collagen.



Pre-validated protocols

BY SCIENTISTS, FOR SCIENTISTS

Protocol-based workflows allow the production of 3D cellular models with minimal effort. The protocol package contains everything from construct geometry to biomaterial selection and dispensing settings. Protocols even include detailed instructions for upstream and downstream processes, ensuring there are no bottlenecks in your transition to a 3D workflow.

Select from protocols pre-loaded on your system, with an ever-growing database of protocols offered as over-the-air updates.



DROPLET

Tumor spheroids
Tumor spheroids (co-culture)
Organoids
Immuno-oncology



DROPLET-IN-DROPLET

Cancer invasion
Cancer invasion (co-culture)



GRID

Bone metastasis



DROPLETS-IN-CIRCLE

Chimeric tumoroid

WORKFLOW BENEFITS

High reproducibility



High cellular viability



Cost effective



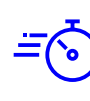
High throughput



Improved downstream imaging



Time savings



Developing the next generation of cancer therapeutics

A bio-convergence workflow

As part of the BICO family, we work with our sister companies to develop cutting-edge solutions that enable extracting meaningful data from reliable 3D cell models.

Cell counting

Kick-start your 3D cell culture workflow by ensuring cell health and density. The CASY cell counter, distributed by CYTENA, can be used to assess cell viability in a label-free method with as little as 10 μ L.

3D model generation

Effortlessly mix cells into tailored biomaterials like TeloCol-10 (bovine collagen) provided by Advanced BioMatrix with full integration with the BIO CELLX. Begin 3D model generation with the click of a button thanks to the intuitive BIOPOD technology onboard.

Plate washer

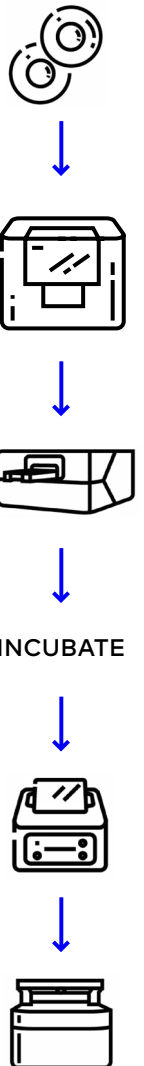
Ensure ideal cell culture conditions with automated media exchange thanks to CYTENA's C.WASH system. Remove old media and directly dispense fresh media all while eliminating the risk of contamination.

Compound dispensing

Begin high-throughput screening by rapidly dispensing different concentrations of drugs and reagents using DISPENDIX's I.DOT, the premier non-contact liquid handler.

Assays and analysis

Harness the power of live cell imaging with CYTENA's CELLCYTE X. Gather essential insights on cell health, cell count, nuclei count all from inside an incubator. Multiplex your assays by adding cell-friendly reagents like C.LIVE Tox and understand parameters like metabolic activity, apoptosis, and membrane integrity.



Technical specifications

Build volume, mm	125x85x38
Build surface compatibility	Multi-well plates 6-well to 384-well, Petri dishes
Resolution XY, μm	3
Layer resolution, μm	1.5
No. of cartridge stations	3
Source fluid temperature range, $^{\circ}\text{C}$	0-60
Volume unit step, μL	0.1
Printbed temperature range, $^{\circ}\text{C}$	0-60
Photocuring system, nm	365, 405, 485, 520
Calibration	Automatic
User interface	Tablet

The best support in the industry

CELLINK's global team of application specialists are ready to provide support when you need it. With multiple support packages available to meet your needs, rest assured you are not alone on this journey. A member of our team can reach out within hours of

receiving your request. We are happy to work by phone, over email, through video chat and on-site to perform installations, repairs and preventative maintenance or application support.

"CELLINK has provided us with excellent support, with on-site presentations and training. Our overall impression of the company and its products is very good and I would not hesitate to recommend it to other labs."

Beata Wojciak-Stothard, Imperial College London

"The customer and technical support has been spectacular, and the company is fun to work with. I look forward to purchasing more instruments from CELLINK."

A.J Mellott, Ronawk



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