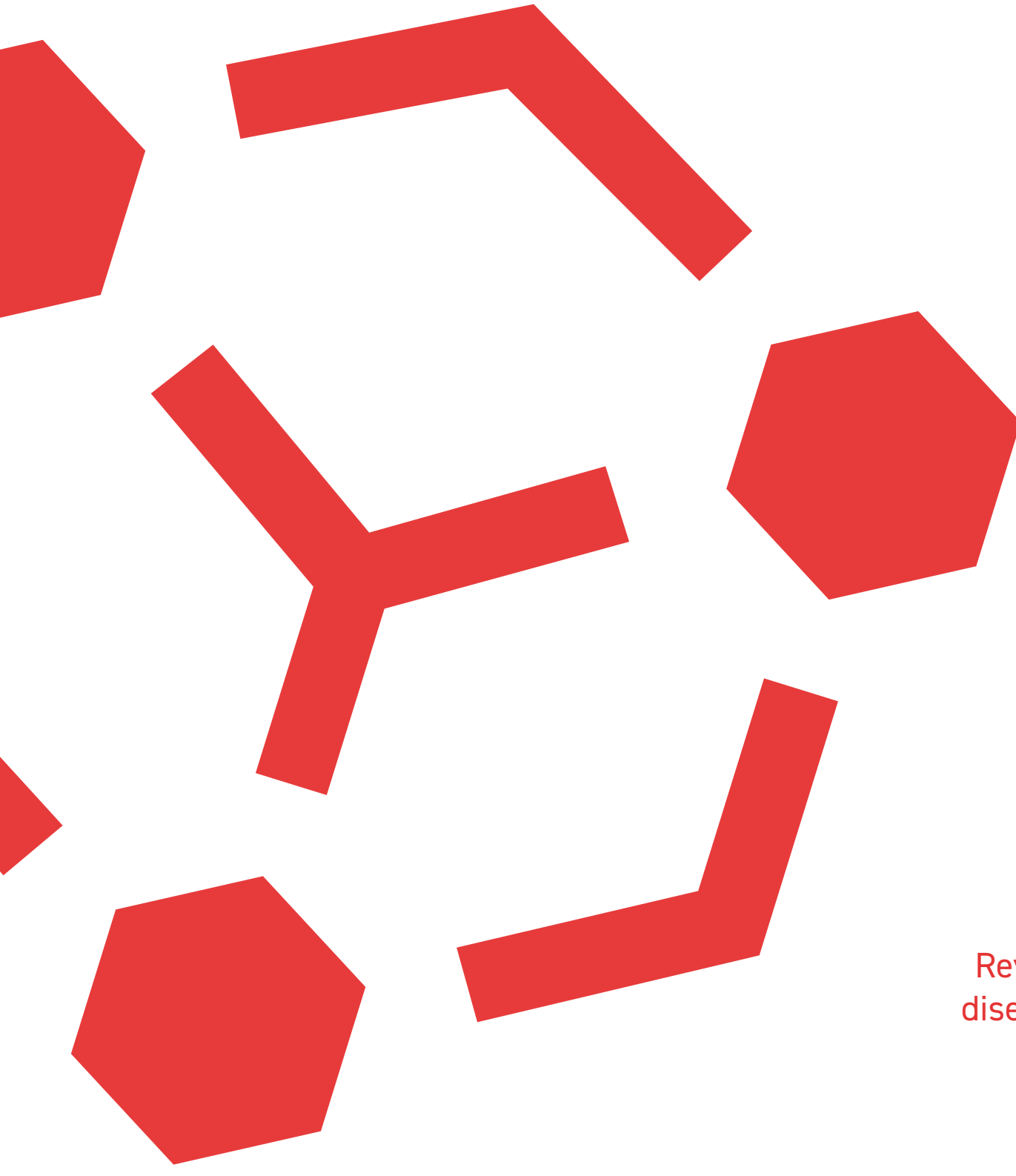


ALLEVI

Revolutionizing the way we model disease, test novel drugs, and study the body outside the body.

ABOUT ALLEVI

Allevi creates tools and solutions to design, engineer and build with life. Our 3D bioprinters and bioinks are used by leading researchers around the world to find solutions to humanity's most difficult problems – to cure disease, to test novel drugs, and to eliminate the organ waiting list.

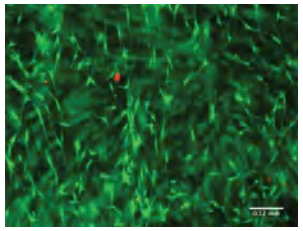
Founded in 2014, our mission is to make it easy to design and engineer 3D tissues. We created our desktop 3D bioprinters to be the most versatile, powerful and easy-to-use bioprinters on the market. Allevi is trusted by leading researchers and industry giants in hundreds of labs worldwide.

We believe everyone has the potential to change the course of medicine for the better. What will you build?

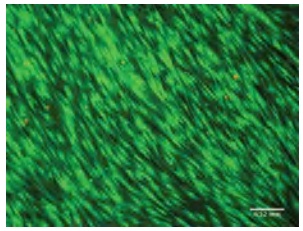
WHY 3D BIOPRINT?

The research community needs better models to study the body outside the body. Through 3D bioprinting, researchers can create more physiologically relevant tissue models that express more accurate biomarkers than their 2D counterparts and are more reliable than animal models.

3D bioprinting offers design freedom and high throughput capabilities that allows users to study tissue in a repeatable and relevant manner.



Traditional Manual Pipette



Allevi 3D Bioprinted

WHAT IS A 3D BIOPRINTER?

3D bioprinters use biocompatible materials (bioinks) mixed with cells to print living tissue. The device builds a 3D structure by depositing materials layer by layer until you have the desired structure.

WHAT IS A BIOINK?

Bioinks are natural or synthetic biomaterials that mimic the extracellular matrix (ECM) to support the adhesion, proliferation, and differentiation of living cells. These materials give cells important cues they need to live, grow, and create functional 3D tissue.

BIOPRINTERS

ALLEVI

KEY FEATURES

PATENTED CORE PRINTHEADS

The patented Cell Optimized Removable Extruders (CORE™) are engineered to ensure high viability across a wide range of bioinks. UV and Blue LED Photocuring and homogeneous cooling and heating components allow you to print everything from hard to soft tissues without having to purchase additional printheads.

SMART CALIBRATION

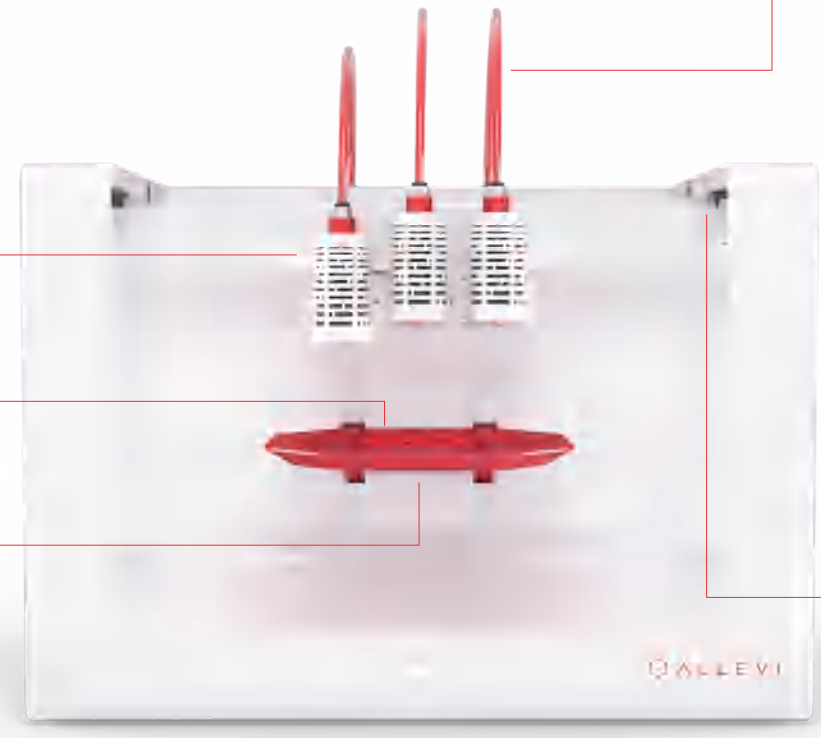
Auto-calibration comes standard on Allevi 1 & Allevi 3 bioprinters. Choose any needle tip and any print dish and your bioprinter will automatically calibrate the printheads.

PRINT BED FOR EVERY DISH

The Allevi print bed is designed to fit different printing dishes with inserts for slides, petri dishes, and well plates.

VERSATILITY

Allevi bioprinters allow you to print with any cell-line in any bioink to create any geometry for any application that you can imagine.



EXTRUSION BIOPRINTING

Powerful and automatic pressure regulators allow you to easily control the flow of a wide range of viscosities from soft hydrgels to thermoplastics. Control the extrusion rate from your Allevi software and even save print profiles for future work.

DESIGNED FOR STERILITY

Designed with you workflow in mind. From testing on a lab bench to working with cells in a tissue culture hood, Allevi bioprinters are portable and easy to sterilize under your cell-culture hood. No doors to get in your way - we know how you work.

PRECISION

Linear rails ensure single micron movements on X, Y, & Z axes. This precision allows you to easily print into well-plates and seed cells.

Allevi CORE™ Technology

The patented Allevi CORE™ printhead is standard on the Allevi 1 and Allevi 3 bioprinters.

Key Features

- Temperature Control: 4°C - 160°C
- Photocuring: UV (365nm) and Blue Light (405nm)
- Syringe-Based System: 5 mL luer lock syringes
- Calibration: Auto-Calibration for any needle length
- Future Proofed: Printheads are interchangeable*

*New printheads are scheduled for continual release

Find the Allevi bioprinter that's right for your lab.

	 **Allevi 1**	 **Allevi 2**	 **Allevi 3**
Extruders	1 × Allevi CORE	1 × Fixed	1 × Allevi CORE
Footprint (W × H × D)	12 × 11 × 11 in	12 × 12 × 12 in	18 × 15 × 14 in
Temperature Range	4–160˚ C	Extruder 1: RT–160˚ C Extruder 2: RT–70˚ C	4–160˚ C
Photocuring	LED – 365 and 405 nm	LED – 405 nm standard 365 nm optional	LED – 365 and 405 nm
Print Bed	Room Temperature	Room Temperature	RT–60˚ C

BIOINKS

ALLEVI

ALLEVI BIOINKS

High printability without sacrificing viability.

We know how important it is for you to work with the best possible biomaterials. We have rigurously tested each and every one of our bioinks in our lab to ensure that they can be easily extruded from your Allevi bioprinter without sacrificing cell viability.

The versatility of Allevi bioprinters means that you can print biomaterials as soft as brain, hard as bone, and every tissue in between. Our dedicated team of Bioengineers charactizes every bioink to ensure consistent results while bioprinting. The syringe-based system ensures that you can continue working with your own biomaterials and custom formulations

It's no wonder that leading researchers and industry giants alike rely on Allevi for their bioink needs.

A BIOINK FOR EVERY APPLICATION

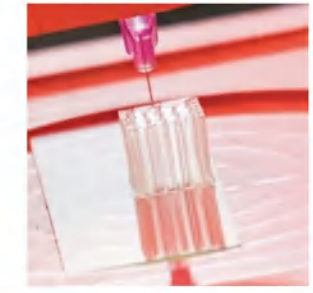
Allevi 3D bioprinters are engineered to bioprint the widest range of bioinks. To achieve best results, cells should be encapsulated in materials that contain their native ECM components. Our bioinks are largely human and animal-derived and do not contain viscosity agents that can negatively affect tissue viability and function. You have high standards for your research and we have high standards for our bioinks.

LIVER	Collagen Lifeink200, PhotoHA, PhotoCol, GelMA, LAP, Organ-on-a-chip, Tissue Layering [5, 8, 12, 14, 16, 17]
HEART	Alginate, GelMA, PhotoHA, PhotoCol, Conductive+ Tissue, LAP [1, 5, 8, 9, 18, 19]
BONE	Bone Bioink, Polycaprolactone, PLGA [3, 5, 6, 7, 10]
CARTILAGE	PhotoCol. GelMA, Polycaprolactone, PLGA [5]
KIDNEY	Vascularization bioink, GelMA, Collagen Lifeink 200, PhotoCol, PhotoHA, Organ-on-a-chip, Tissue Layering [5, 8, 20]
NERVOUS SYSTEM	Conductive Tissue, Collagen Lifeink 200, GelMA, Additives (human tropoelastin) [1, 5, 8, 11]
SKIN	Skin Bioink, GelMA, Additives (bovine col type II/V, human col type IV, human tropoelastin) [5, 8, 15]
VASCULARIZATION	Vascularization bioink, Lifeink 200, Additives (bovine col type II/V, human col type IV, human tropoelastin) [2, 4, 5, 8, 13]
LUNG	Tissue Layering bioink, Vascularization bioink, Organ-on-a-chip, Additives (bovine col type II/V) [5, 8, 22]
DENTAL	Polycaprolactone, PLGA
BRAIN	Silk Fibroin, Alginate, PureCol, Tissue Layering [5, 8, 21]

ALLEVI BIOINK PROTOCOLS







Our bioengineer-designed protocols were inspired by high-impact papers published by our amazing community of users. Allevi bioink protocols are rigurously tested in our lab and include all of the steps you need to easily and quickly recreate state-of-the-art bioprints in your lab. Follow our step-by-step protocols and bring your research to the next level.

- Bone
- Organ-on-a-chip
- Skin
- Sterile GelMA
- Tumor
- Coaxial
- FRESH Method
- Tissue Layering
- Vascularity

Allevi Partnerships

Lonza

Rheolution instruments

etaluma™

Advanced BioMatrix Innovative 3D Solutions

FLUIDFORM PRINTING THE IMPOSSIBLE

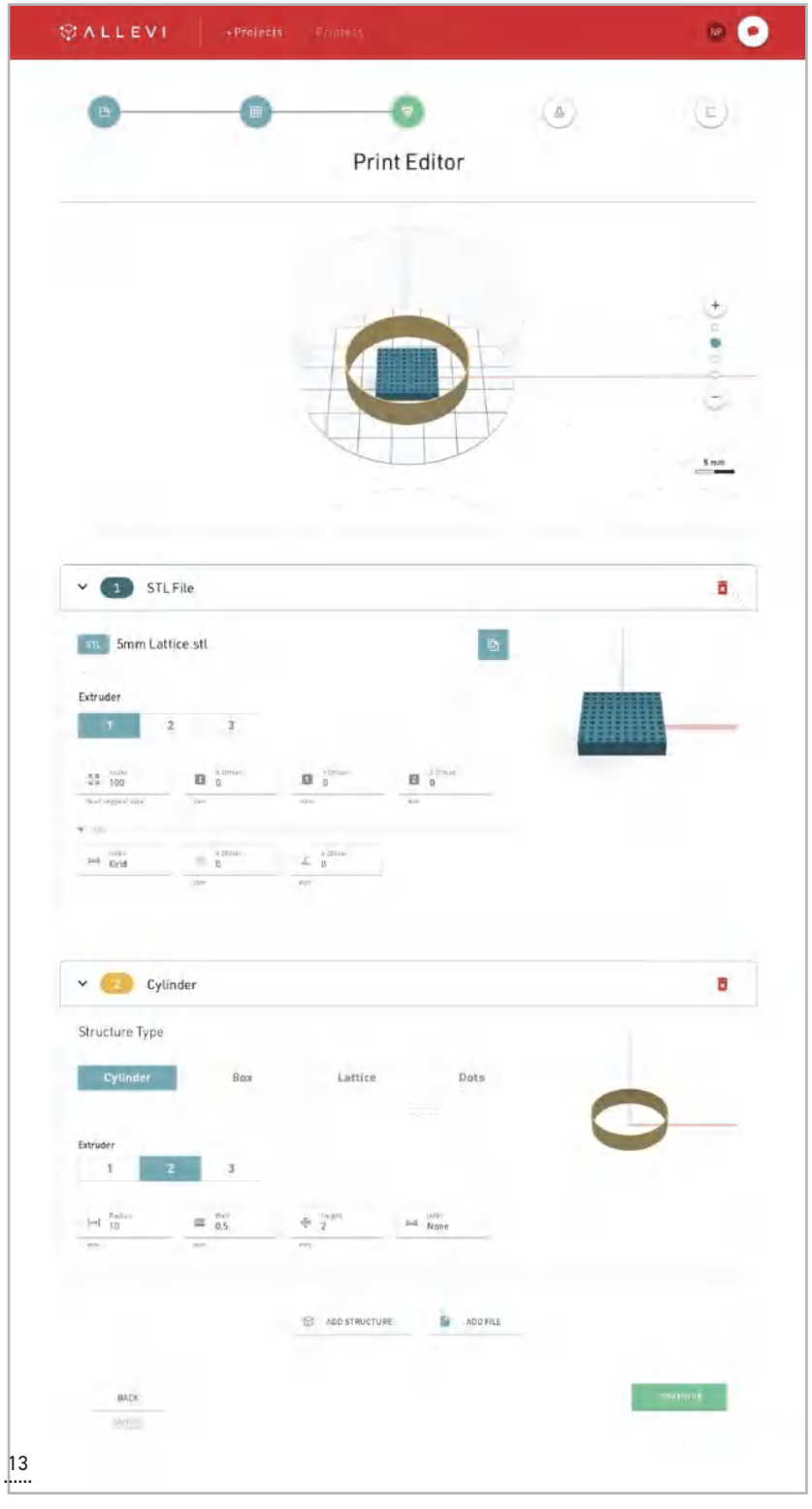
Volumetric

XYLYX

Dimension Inx

SOFTWARE


ALLEVI
Connected to: Printer Name
Status
IDLE
File: SomeFIle.stl
Build platform: 6-Well Plate
Estimated print time: 1 hr, 17 min
DETAILS
Extruder 1 temp: 100°C
Extruder 1 pressure: 40 PSI
Calibrated
Extruder 2 temp: 120°C
Extruder 2 pressure: 30 PSI
NOT CALIBRATED
Crosslinking: Enabled
START PRINT
RESET PRINT
ALLEVI

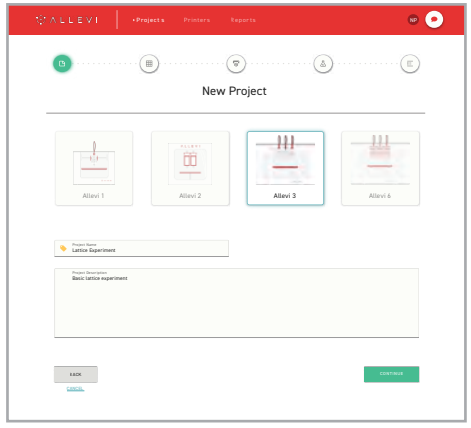


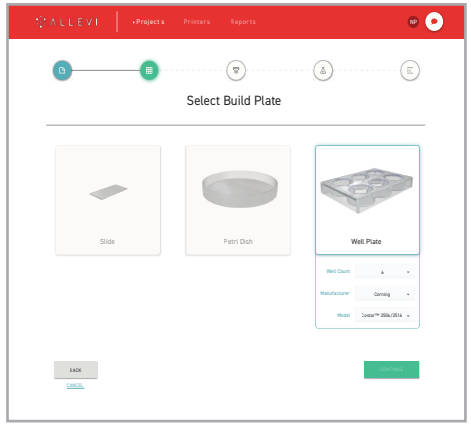
DESIGN. BIOPRINT. REPEAT.

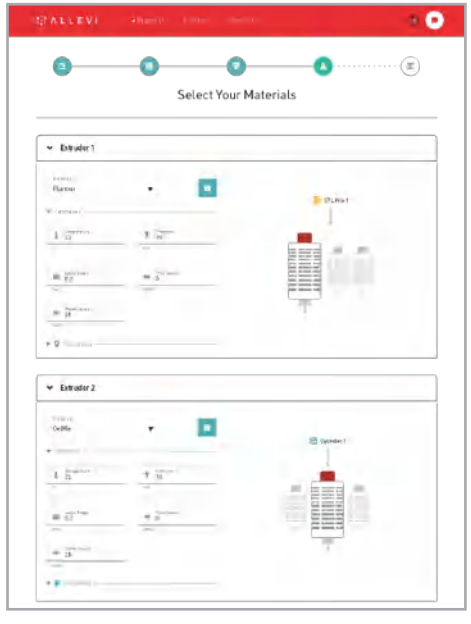
Designing and building with life is easier now than ever before.

The Allevi software empowers novice and expert 3D bioprinting users alike to quickly and easily achieve their goals.

The Allevi software is going to completely change the way you run bioprinting experiments.







BIOPRINTING. SIMPLIFIED.

Web-based workflow

- Print settings and data are stored securely in the cloud
- Print from any computer with no additional setup

Built-in material profiles, validated for Allevi bioinks

- Ideal print parameters take the guess work out of new bioinks
- Save time and money by using profiles as a jumping off point

Integrated slicer with shape editor for building models

- No need for 3rd party slicing software with complicated settings
- Interactive 3D renders show your structure before you print

Project-based workflow for optimal print repeatability

- Set up your model, wellplate configuration, and print parameters once, then hit “print” to make identical copies
- Easily modify projects and save additional versions

Allevi dynamic printing options

- Interpolate multiple parameters across a wellplate, to quickly determine the best settings for your experiment, or run multiple trials simultaneously

ALLEVI PROTOCOLS

The first ever online repository for 3D bioprinting best practices and protocols.

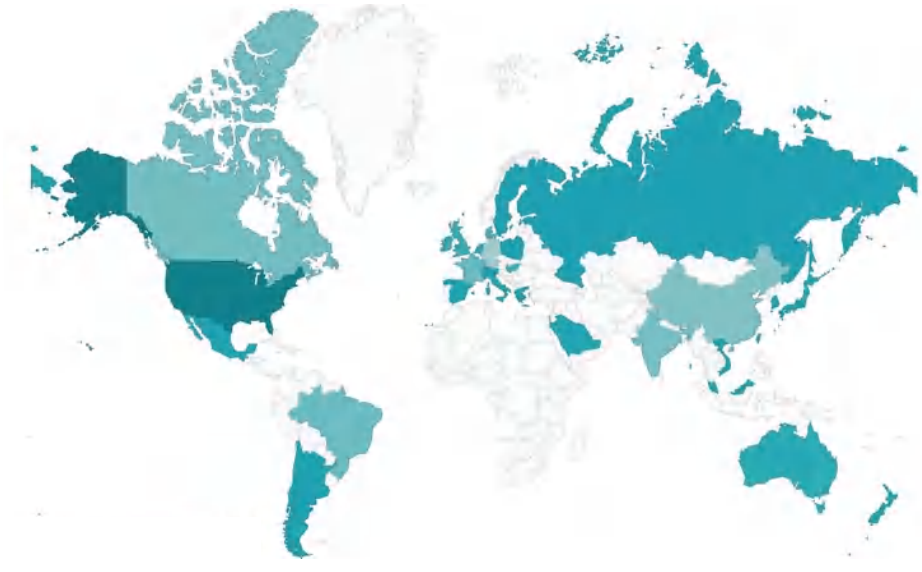
From choosing the best materials for your application to detailed instructions for complex prints, Allevi protocols are here to help you succeed.

Our repository is constantly updated to have the cutting-edge techniques and best practices to help keep your research relevant.

Accelerate the pace of discovery. Build with Life.


COMMUNITY
ALLEVI

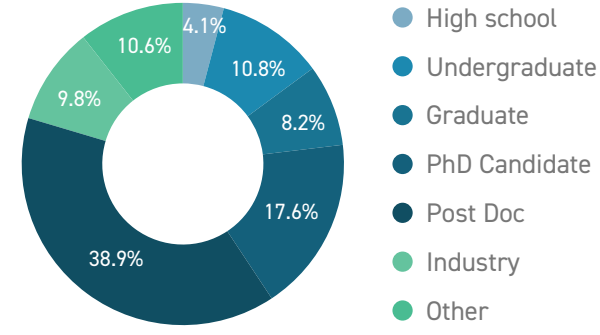
ALLEVI BY THE NUMBERS



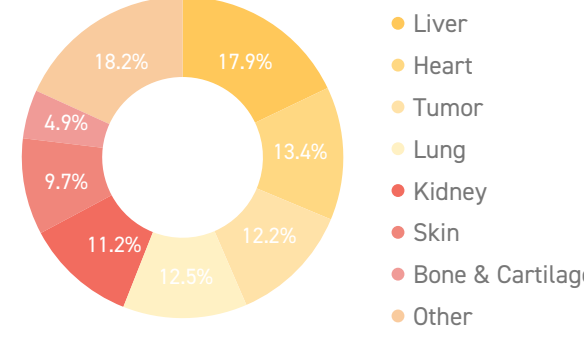
350+ LABS

40 COUNTRIES

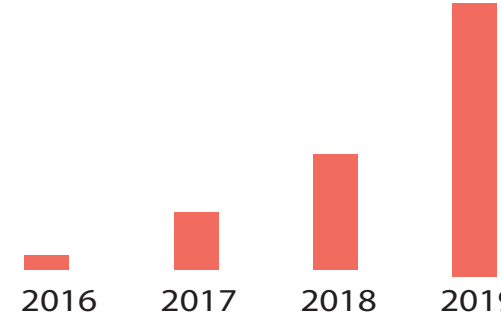
User Profiles



User Tissue Types



User Publications By Year



Dedicated to Your Success

At Allevi's core is our dedication to your success. We work to make our devices and software user-friendly and intuitive. We publish guides, write protocols, and post videos which help you bioprint faster and better.

Our relationship doesn't end after your purchase. We're here to help you succeed with your Allevi bioprinter and bionks. The Allevi Customer Success team is available to assist with everything from on-boarding to application specific projects. We're here to help you reach your goals.

"The Allevi Customer Success Team is incredibly helpful in terms of providing us with relevant information. They are always available, accessible and quick in responding to any of our queries. Getting started with our newly set-up equipment was much smoother with their support, and we never feel like we are experimenting on our own. Being part of the Allevi community is a privilege because they are always thinking ahead and implementing the latest technology with their systems, making them accessible for their user."

Meysam Keshavarz

Imperial College of London

"Allevi takes care of their customers. They are willing to take the time to help you diagnose a problem and find a solution."

Bowman Bagley

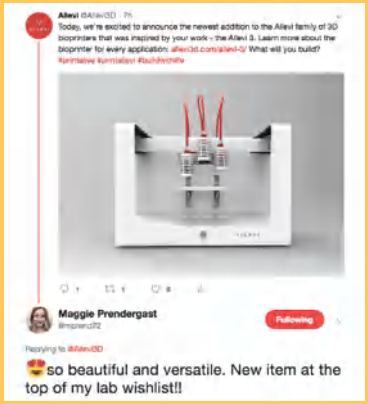
Advanced BioMatrix

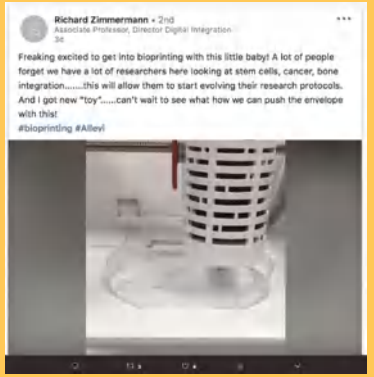
"We are currently using this technology at the University of Limerick to find new ways of regenerating cartilage tissue. Overall I have found the equipment, the software and interface are very user friendly and simple to learn for new users. The printer is very versatile as it allows the user to print a variety of bioinks including customised composite bioinks and also allows for the co-printing with thermo-plastic materials. One of the main aspects of Allevi that I find invaluable is the support provided. I have found the team very quick and helpful in responding to any queries that I have had."

Caroline Murphy

University of Limerick

#bioprintallevi #buildwithlife





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BRING YOUR WORK TO LIFE.