PRINT THE FUTURE...

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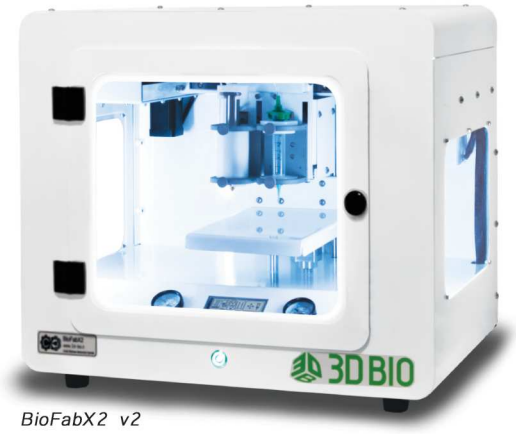


BioFabX2 v2

Innovative techniques for tissue engineering have a tremendous impact on the future of the medical world. 3D bioprinting is a transformational technology which holds great promise for the development of native-like tissues and organs. Omid Afarinan Mohandesi Ayande Company, concisely called 3D-Bio, started its professional activity in 2016 with the goal to create a paradigm shift in the future of regenerative medicine. 3D-Bio comprising a team of engineers, biologists, chemists and physicians focused at first on designing and development of various advanced bioprinters. These efforts resulted in leading-edge 3D bioprinters in two series named ***Pioneer*** and ***BioFab*** that provide best solutions for specific investigations. Our modular bioprinters provide high/low-temperature printheads and print surface, filament extruder, coaxial printhead, and photocuring tool along with a sterile print chamber by employing HEPA H14 filters and UV sterilization that make them of the most flexible ones in the world.

Thermoplastic Printhead

Heat up to 200° C

Cold Printhead

Cool down to 4° C

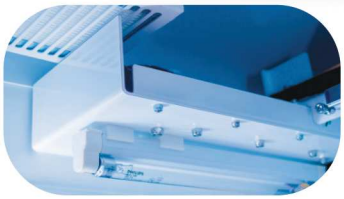
Filament Printhead

Filament melting system

Photocuring Printhead

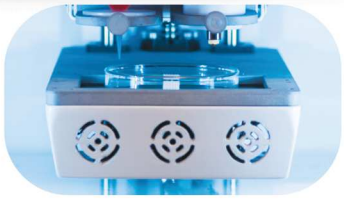
UV and visible light crosslinking

PioneerX4 v2



Clean Chamber

Positive air pressure inside the bioprinter chamber through HEPA H14 filters (Available only in BioFabX2 and PioneerX2)



Cold/Hot Print Surface

Temperature-controlled surface for specific bioinks

	BioFab Series	Pioneer Series
Printing Technology	Pneumatic Micro-Extrusion	Piston Extrusion
Number of Printing Heads	Up to 4 (BioFabX4)	Up to 4 (PioneerX4)
Axis Resolution	0.02 mm	0.02 mm
Pressure	0.1 to 7.0 bar	0.1 to 5.5 bar
Speed	0.1 to 50 mm/s	0.1 to 50 mm/s
Build Volume (XYZ)	90 × 90 × 50 mm	90 × 90 × 50 mm
High-Temperature Printhead	Up to 200℃	Up to 200℃
Low-Temperature Printhead	Down to 4℃	Down to 4℃
Print Surface Temperature	Heating Up to 60℃ Cooling Down to 4℃	Heating Up to 60℃ Cooling Down to 4℃
HEPA H14 Filter	Optional	Optional
Coaxial Bioprinting	Optional (Up to 4 axis)	Optional (Up to 4 axis)

3D-Bio Software

3D-BioSoft is a home-built operation system with an intuitive user interface and a simple workflow that integrates powerful tools in order to adjust printing parameters and control printed structures. Moreover, a complete library of human organs, tissue models and their printing protocols provided by 3D-Bio helps scientists to evaluate their ideas very quickly with minimum clicks. This software also maximizes ease-of-use with a step by step procedure and minimizes the learning time and bioprinting process.

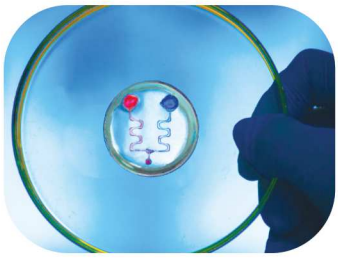
Bioink

Bioinks are substances made of synthetic/natural biomaterials that are employed for printing bio-based structures.3D-Bio, along its bioprinters, provides a series of ready-to-use bioink presenting great printability, biocompatibility, and bioactivity that can be used for various applications including regeneration of bone, skin, cartilage as well as mimicking cancer models. For now, 3D-Bio offers a diverse selection of bioinks comprising support, thermoplastic, sacrificial, and cell-laden ones, as well as customized bioinks on request.

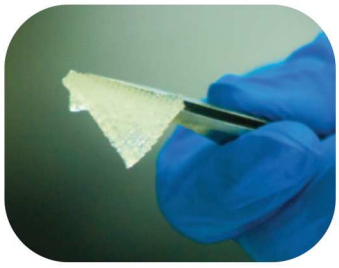
Bioprinting Kits

3D-Bio kits are a unique starting point for using bioprinters and working on new ideas. These kits come with everything you need to construct your bioprinted structures including bioinks, accessories, cartridges, additives, and protocols. Current 3D-Bio kits like Micro-Fluidic kit, Bone kit, and Coaxial kit are tailored for specific applications and researchers' needs.

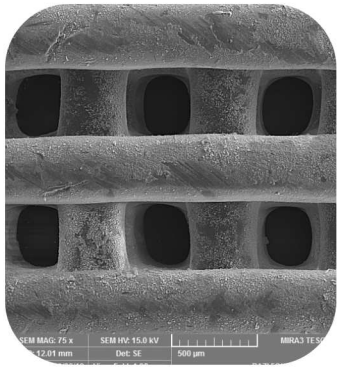
Single-Channel Microfluidic Device



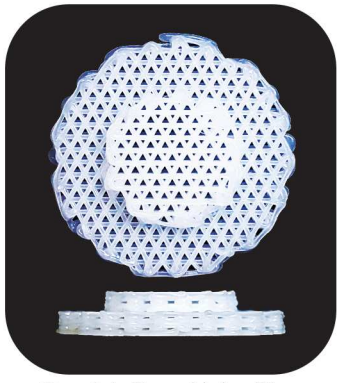
Multi-Channel Microfluidic Device



Scaffold for Soft Tissue Engineering



Scaffold for Hard Tissue Engineering



Cranial Burr Hole Plug

WE PRINT EVERYTHING...

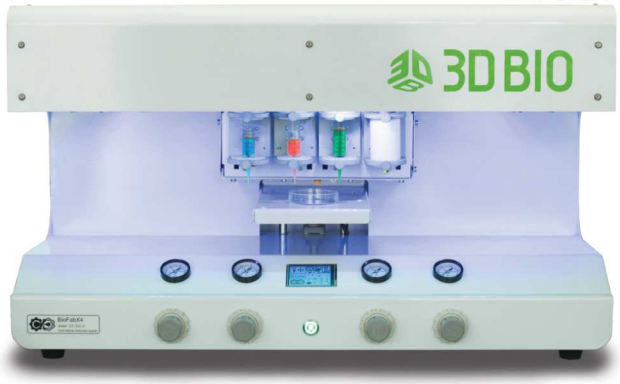
Gel

Filament

Pellet

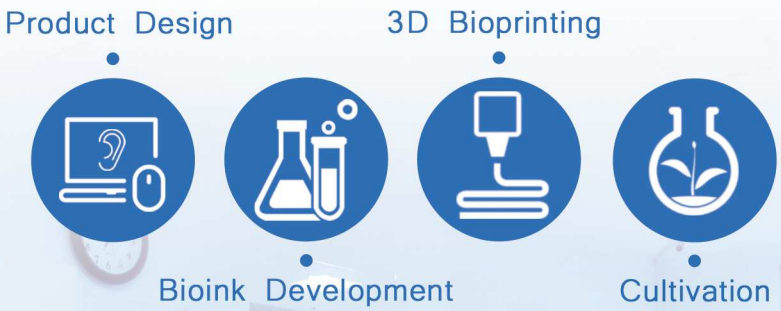
Powder

BioFabX4



Bioprinting is a new area of research with a bright future in the field of regenerative medicine, drug screening, and testing new cosmetic products. Recent researches on bioprinting have shown promising potentials in biofabrication of small tissue structures and complex organs.

3D-Bio team, as a national pioneer in bioprinting, provides reliable bioprinters, as well as other bioprinting requirements as a complete solution. Our well-equipped lab provides all the bioprinting needs comprising procedure design, computer-aided modeling, customized bioinks, bioprinting with specific methods, cell culture, post-bioprinting processes and a wide variety of evaluation tests designed for printed structures. These services are available through ***labsnet.ir*** website.



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