BioBots unveils 3D biology toolset

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BIOBOTS

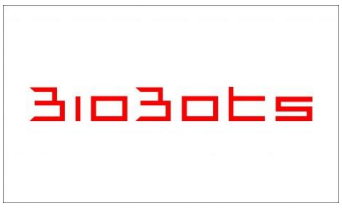
The company's expanded product offering includes the BioBot 2 bioprinter.

BioBots is expanding its product line beyond three-dimensional bioprinters.

"We have been working closely with scientists over the past year and a half to really understand what it is that they need in order to push their work forward," said Danny Cabrera, BioBots' co-founder and CEO. "What we found is that they wanted more than just a bioprinter, they wanted ways to measure how different parameters affected biological processes."

To address that need, BioBots has created and launched what it is describing as a suite of tools for doing 3D biology. "They are in three stacks," Cabrera said, "Software, hardware and wetware."

For the hardware, he said, the company has built the BioBot 2, which it promotes as "the most powerful yet easy to use bioprinter in the world." BioBot 2 has six print heads that each cool to 4 degrees Celsius and heat to 200 degrees Celsius, and can print mixtures of cells and biomaterials. The BioBot 2 is also equipped with lights for photocrosslinking — a process for creating a covalent bond between two macromolecules [such as nucleic acids or proteins] or between different parts of one macromolecule — and employs a sophisticated array of sensors and computer vision to automatically set all the printing parameters for new materials.



“It goes above and beyond our first BioBot,” Cabrera said. “It’s integrated with software tools that make it easier to use, and make it easier to connect with the community [of researchers using the device].”

BioBot has sold hundreds of its original BioBot 3D printer, at $10,000 each, and plans to continue selling and servicing the product that produces a variety of biomaterials. Cabrera said BioBot 2, because of its expanded capabilities, is carrying a higher $40,000 price tag.

On the software end, Cabrera said, the company has created an entire “project management suite” designed to let our users of its portable 3D printers create experiments, run bioprinting studies, and analyze their data — entirely in the cloud.

In the area of wetware, the company is releasing three new kits — a hard tissue kit for fabricating hard tissues, such as bone and cartilage; a soft tissue kit for exploring soft tissues like skin, lung, and liver; and a collagen kit that empowers users to print collagen at very high resolutions.

Biobots was founded in 2014 by Cabera and Ricky Solorzano in a University of Pennsylvania dorm room. The company, a participant in the DreamIt Health accelerator program, has grown to eight employees and has plans to hire four more people this summer.

It has raised nearly $1.5 million from private investors, including $310,000 through a crowdfunding campaign during the summer of 2015. Its backers include Ben Franklin Technology Partners of Southeastern Pennsylvania and BioAdvance, both based in Philadelphia.

“The Biobot team continues to innovate to address life science bioprinting challenges,” said Sahram Hejazi, a BioAdvance venture partner. “As one of the first investors in BioBot when the company was just developing its first product, we are very pleased to see the company’s success and the growing market adoption of its products.”

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