

Vytalyx eager to disrupt health care

STARTUP EYES FUNDING, REAL ESTATE FOR MANUFACTURING

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ospitals using big data to help doctors better treat their patients sounds like common sense.

Yet they don't, according to David Granzotti, CEO and co-founder of a startup called Vytalyx Inc.

Instead, the health care system tends to apply analytics to increase operational efficiency and reduce cost and risk, he said.

But imagine a doctor who read every research report that exists, then consulted with five to 20 subject-matter experts to diagnose ailments and prescribe treatments specific to each individual said Granzotti, who is 48. So tailored would the protocol be that many medications and dietary supplements would be manufactured the same day to match a person's needs.

To do that, Vytalyx will employ machine learning with anonymized data from 65 million patients obtained from an electronic health records company and a national hospital chain, Granzotti said. He declined to disclose the partners' names.

Dozens of other datasets will inform the Vytalyx artificial intelligence, including an individual's genome, medical history, biomarkers, and those collected by wearable devices and drug-interaction and allergen databases.

Such an approach "has been a long time coming," said Dr. Andre Granzotti, 55, an anesthesiologist who is Vytalyx's co-founder and chief medical officer.

The two brothers and Austin natives have been talking for years about launching a company that would marry medical expertise with data in the clinical sphere, said Dr. Granzotti.

Doctors will be able to use the Vytalyx platform to personalize prescriptions and dietary supplements and nutrition and fitness programs. They also will be able to license the Vytalyx AI for use in their respective practice areas, David Granzotti said.

Company executives are working with groups in Europe to enable non-American, as well as American, patients to use Vytalyx, he said.

Dr. Granzotti envisions patients fueling adoption of the Vytalyx approach.

"It's very powerful when your patients ask you about something," he said, adding that it makes trying something new cheaper and easier.

Patient buy-in will be necessary due to the inertia that exists in the U.S. health care system overall, Dr. Granzotti said.

"We're five to 10 years behind where we should be," he said. Examples he cited included the lack of incorporating patients' diet and fitness into assessing and treating those patients beyond cursory questions.

Vytalyx, however, will do a "real deep dive" in those areas to provide more insight to a patient's condition, Dr. Granzotti said.

Among the ways that will manifest itself is health professionals such as dietitians, nutritionists and personal trainers who use Vytalyx will be able to personalize their clients' nutrition and fitness programs.

Vytalyx plans to develop three applications: for consumers, physicians and health professionals.

The company will focus on thyroid and hormone replacement practice areas initially, Dr. Granzotti said.

With the massive amounts of data on hand, the Granzottis believe they might be able to get medication dosage correct during the first doctor visit instead of today's typical six months to a year timeframe with several visits.

On horizon: \$88M, blockchain and a new building

Vytalyx executives plan to raise \$60 million in a security token offering later this month or early June. Cal-



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Brothers David and Andre Granzotti are leveraging blockchain technology, big data and partnerships with big players to reinvent the way patients are treated.

ifornia-based Boustead Securities LLC will be the exclusive placement agent.

Another \$28 million will come within 60 to 90 days once the company closes a series A funding round, David Granzotti said.

He declined to disclose the total amount of the company's closed seed round, but he said it "should allow us to deliver [our minimum viable product] to the market this year."

Granzotti projected the runway from the series A round and the token offering at between two and five years. The series A and token offering also will help determine the company's potential exit strategies, Granzotti said.

The company plans to use blockchain technology to enable patients to become owners of their health care data, he said. Blockchain is a digital distributed database system, an open electronic ledger that publicly records transactions.

Using the Vytalyx blockchain, doctors will be able to access patient health records and cater treatment regimens unique to each person.

That is part of what lured Dr. Asad Mahmood to become a Vytalyx adviser. He earned his medical degree and passed all medical certification exams, but chose to join IBM in 2016, rather than entering an internal medicine residency.

The Washington, D.C.-based IBM Watson cloud and blockchain engineer described blockchain as "an excellent application for health care."

It can "ingest a multitude of different information related to a specific patient, predict the most likely diagnosis, recommend the most appropriate intervention and provide the treatment regimen specifically customized for that patient alone," Mahmood said.

He predicted Vytalyx "will completely reform the way physicians take care of their patients and significantly increase the amount of healthcare information accessible to each patient."

The company currently employs 10. But David Granzotti said that total likely would balloon to between 40 and 60 about eight to 12 months after it raises a certain amount of its funding round. And during the next three years he expects payroll to exceed 125.

Vytalyx has signed a letter of intent for a

50,000-square-foot location in East Austin, Granzotti said. Vytalyx is working with Quick & Company Commercial Realty Inc.

But the executive team is considering buying 8 acres that could host a facility up to 100,000 square feet.

That decision will be made within the next 30 days, he said.

The company plans to register a medication- and supplement-manufacturing facility with the U.S. Food and Drug Administration under a new section of the 1938 Federal Food, Drug, and Cosmetic Act that was added in 2013 by the Drug Quality and Security Act.

That section spells out the rules for making personalized medications exempt from FDA approval and product-labeling requirements.

Granzotti expects Vytalyx to begin generating revenue in the next 12 to 18 months, and two to three years to become profitable.

While the executive team sees several companies as competitors, including the National Health Institutes' All of Us Research Program, eHealth Inc., Viome Inc. and Segterra Inc., "we believe that most of our competitors specialize in one segment of our model," he said.

Vytalyx board member, Dave Wentz, agreed. In fact, the company's "comprehensive" approach is part of what attracted him to Vytalyx.

"Personalized nutrition has a been a passion of mine for a while," said Wentz, who was CEO of USANA Health Sciences Inc. (NYSE: USNA) for about 25 years. The Utah-based company develops, manufactures and sells nutritional and personal care products, according to Bloomberg.

"This is where medicine needs to go, and should've gone sooner, in my opinion." $\,$

Vytalyx Chief Marketing Officer Jennifer Tanguy sees "asking consumers to embrace the change" the company will effect in the health care industry as the most significant challenge before her and her colleggues

"We not only have to educate consumers, we have to build consumer trust so that they are compelled to adopt the Vytalyx solution," Tanguy said. Z