Startup Spotlight: In a 'growth phase,' Richmond-based Grenova has opened a new office and production plant

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It’s taken some time, but the startup business that Ali Safavi founded in 2014 with a mission of reducing plastic waste in laboratories is gaining traction.

“We are in a growth phase now,” said Safavi, the CEO of Grenova. “That is one of the reasons we’ve moved to a new facility — to be able to scale up our manufacturing.”

In February, Grenova departed its previous office and production site just off Midlothian Turnpike and occupied a larger space in the Clopton Siteworks, an array of former tobacco warehouse in South Richmond that is being redeveloped as a home for various businesses.

Grenova’s 10,000-square-foot office and manufacturing plant occupies one of the buildings in the complex, which Safavi likes to refer to as a new “startup campus” in the Richmond region.

For instance, another building in Clopton Siteworks is home to Hatch Kitchen, an incubator that offers shared commercial kitchen space and mentoring for entrepreneurs with food-related businesses.
In the Grenova plant, engineers assemble the company’s TipNovus devices, a patented tool that Grenova sells or leases to laboratories around the world.

Safavi founded Grenova, which is short for Green Innovation, after working seven years for a laboratory automation company in North Carolina, where he also attended college and graduate school and co-founded his first business venture, a food truck business that eventually was sold.

In the laboratory automation business, Safavi noticed how many plastic materials that laboratories dispose. For instance, laboratories use large amounts of plastic pipettes, most of which go into the trash after one use.

“I thought there had to be a better way,” said Safavi, who put to use his undergraduate degree in biomedical engineering and spent more than a year working on a prototype washing and sterilizing machine that could be easily installed in any laboratory.

The company has since developed several versions of its TipNovus machine, which enables labs to clean plastic pipette tips in large quantities so they can be reused.

“That helps the environment, and it helps the labs reduce operating costs,” Safavi said.

“One I had developed the initial technology, I brought in other professionals to take it to the next level,” he said. “This has not been a one-man operation.”

One of the company’s biggest challenges has been “changing the culture” of laboratories, Safavi said. Many of the investors to whom he initially pitched the business idea were skeptical about the prospects for that.

“Changing culture is one of the toughest things to do,” he said.

A study conducted last year by a team of researchers at the National Institutes of Health concluded that using the Grenova system “has helped us to take a significant step towards operating in a more environmentally conscious manner while continuing to produce reliable high-quality data.”

Grenova now has sold or leased machines to commercial and government labs across the country, Safavi said.

“Last year, we started implementing systems overseas,” he said.

Grenova machines have helped labs remove about 200,000 pounds of plastic from the waste stream in the past three years, he said.
One of Grenova’s customers is Ripple Foods, a California-based maker of nondairy products from pea protein, including milks and nutritional shakes. In its lab, Ripple uses a liquid handling robot to test and optimize protein extraction from new protein sources, and to quantify how the resulting protein functions in food.

“This is where Grenova comes in,” said Bridget Smith, a scientist for Ripple Foods. “Our work on this liquid handling robot results in a lot of plastic waste through pipetting tips. With our Grenova tip washer, we’ve been able to reuse almost 40,000 tips since 2018, which is about 27 kilograms of plastic.”

Grenova now employs 10 people, and Safavi said he is expecting to add jobs this year as the company ramps up manufacturing of its devices.

“We are going to expand our product line to other plastic consumables. We are going to look at cleaning other plastic laboratory materials such as test tubes,” Safavi said. “The aim is high.”

By John Reid Blackwell