

Agilent case study: Paige Schaffer

## Agilent Automation Aids Biotech Research

Fast, accurate data guides Vividion Therapeutics in the right direction

**"Vividion Therapeutics is applying pioneering platforms to reveal druggable opportunities across the entire proteome, much of it previously considered unfeasible."**

Paige Schaffer is pleased to be part of that process.

"I'm very excited about what Vividion will accomplish as I continue working with scientists from a variety of different backgrounds," she says. "Vividion uses a proteomics platform to identify binding sites, and our team is working on testing binding to thousands of proteins at once. My role in all that, in compound management, is to get compounds to our scientists quickly so they can get them into their assays."

A research associate, Schaffer joined Vividion in the summer of 2017 when the company was in its early stages. Since then, she notes, the rapidly growing company has added a lot of automation, namely Agilent Bravo liquid-handling systems.

"We are always trying to get things done quickly and accurately while being able to reproduce the same results," she says. "Since we're growing, the biggest thing we want is to be able to increase our throughput to produce more data. Making experiments as efficient as possible while maintaining the quality has been critical to our success."



Paige Schaffer

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## Faster and more accurate

With more and more employees running the same assays, protocols, and experiments, consistency has been vital.

"Before, I was doing simple tasks like dilutions across the whole 96-well plate, all by hand, so it took a lot of time and, as you can imagine, the accuracy was not as great as something automated. So that was the first thing that went onto our Bravo system. After that, we put in all our compound plates, so serial dilutions, which was huge. It allowed us to really increase our throughput because of the speed and accuracy of the Bravo system," Schaffer says

"With these systems, we went from making 100 compound plates in nine months to making 100 in less than three months. Not only is the Bravo faster, but we've seen more accuracy, so experiments that have been moved to the Bravo have delivered equivalent or better data than we were getting before."

But, to Schaffer, the best thing about the Bravo is that it frees up scientists to work on other things.

"What led us to the Bravo is that we were really limited in how many people we had when we first started, so we needed something to help us get faster and more efficient. That led to us purchasing a liquid-handling system," she explains.

## From QC to complex experiments

Vividion used its first Bravo system to run quality control plates. Since then, use of the Bravo platform has evolved from simple liquid handling to more complex experiments with time incubations and so on.

"Now we have two that are used as walk-up systems, where researchers can just walk up and run a protocol that was developed earlier. A third one will go on an automation platform," Schaffer says.

"I'm at a point now where I'm helping other scientists develop their protocols for different experiments, so I'm not so much the end user like I was before. I've been able to help other people get onto the Bravo system, helping them get more efficient. Also, it's been a great opportunity for me to learn more science and learn from my coworkers."

## Data points the way

"We've been able to increase the number of experiments we're doing, and the Bravo platform also helps with the data analysis end of things. We're very data driven. We rely on the data to show us which direction to go. Because we've been able to run so many more experiments so much quicker, we're able to know what our next direction should be."

Schaffer notes that this saves the company money because researchers are less likely to go down the wrong path.

"We've also saved on resources because of the Bravo system," she says. "We've been able to decrease the amount of compound we're using because the accuracy of the machine is better. In one of our assays, for example, we were using 2 microliters of compound and we were able to reduce that down to 0.5 microliters, so it really helps. We can use the rest for different types of experiments."

Schaffer also finds the Agilent VWorks automation control software easy to master.

"I've only been using the Bravo for a little over a year, and I've been able to manipulate the software quite a bit and been able to help other scientists with their protocols. It's been fun. I'd say it's pretty easy to learn, too. I'd never worked with a liquid-handling system before, but the Bravo software is really straightforward. I was able to jump in quickly without much assistance. With that, Agilent support has been great, getting back to me quickly when I have questions. I'm excited about exploring what more it can offer."

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