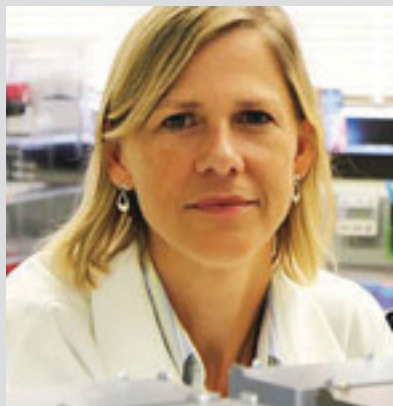


GROUNDBREAKING RESEARCH UNIVERSITY RELIES ON AGILENT BRAVO PLATFORM FOR REPRODUCIBLE RESULTS



Paige Vinson, Ph.D.

Director
High-throughput Screening Facility

Paige Vinson directs a high-throughput screening facility that serves scientists in multiple disciplines.

"It is very gratifying to work with the many investigators here at the university who are doing exciting, groundbreaking research, whether it is basic pharmacological probe development or a full drug discovery program," says Dr. Vinson.

The facility supports both target-based and phenotypic screening projects. Dr. Vinson notes that one of their Bravos is integrated into a screening platform and serves to deliver test compounds into kinetic assays that have been designed to measure target activity. Examples of these assays include enzyme assays measuring fluorescent product generation and calcium flux assays reflecting metabotropic glutamate receptor activity.

"In many cases, our university's researchers have discovered small molecules that regulate targets," Vinson says. "As a shared resource, we help enable this work with technology that allows both an increase in scale and capability."

Fast, Reliable, Easy to Use

One of her facility's key tools, which many users rely on heavily, is the Agilent Bravo Automated Liquid Handling Platform.

"We provide an array of services to customers at our institution. These services include small molecule screening, siRNA screening, compound management, assay development, and walk-up instrumentation use," she says. "The users of our facility face a challenge upon scaling their assay to 96- and 384-well formats. **A critical component of successfully executing these types of experiments is reliable liquid handling.** This is also true during screening where many plates are run under the same condition and reproducibility is key."



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"One of the real strengths of the Bravo platform is that it can be used for a variety of applications."

Vinson also points out that the Bravo platform enables the facility to provide liquid handling under the kind of sterile conditions needed for siRNA screening as well as some cell-based assays. The platform also meets the facility's need to perform serial diluting of multiple compounds across a plate in a reliable and reproducible manner.

Bottlenecks are Elsewhere

One of the real strengths of the Bravo platform, Vinson says, is that it can be used for a variety of applications. Her research lab uses three of them, as follows:

- One is part of an integrated system used for compound addition to assay plates – either cell-based or biochemical assays. It is also used in walk-up mode for compound additions, reagent additions, and serial dilutions.
- Another (also part of an integrated system) is used for reformatting tube racks into well plates and for plate replication. Like the first system, this one is also used in walk-up mode.
- The third is used in a tissue culture hood for use with applications needing sterile conditions such as compound additions offline with long-term incubation of cells. It is also used a great deal for siRNA applications.

"Usually throughput is not an issue for us. The bottlenecks are elsewhere," Vinson says. **"With that said, for our screens we will run about 20 plates per day, and the Bravo can easily manage that. For plate replication or reformatting, there is no comparison to manual as the Bravo is much faster."**

In fact, she points out, it was the Bravo Automated Liquid Handling Platform that made it possible for her facility to reformat 100,000 compounds from tubes into well plates, then replicate the plates six times. All of this was done (quickly and reliably) to create a compound library – an invaluable resource for university scientists seeking the right substance to modulate a target of interest in their research.

To learn more about how Agilent is striving to meet the complex needs of scientists and researchers around the world, visit **www.agilent.com/chem/automation**

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