



**Kinetic River Corp. completes Phase I SBIR grant  
from the National Institutes of Health**

*Milestone reached toward simpler, more powerful  
multi-parameter Flow Cytometry*

**Mountain View, Calif., USA, January 31, 2018** — Kinetic River Corp., a leader in custom flow cytometry instrumentation, announced today the successful completion of a Small Business Innovation Research (SBIR) project funded by the National Institutes of Health (NIH). The competitive Phase I grant was awarded to Kinetic River in 2017 by the National Institute of General Medical Sciences (NIGMS), which fosters research focused on development of innovative biomedical diagnostic and therapeutic platforms.

Flow cytometry has long been hampered by limitations in the number of concurrent fluorescent labels that can be distinguished in a cell assay. Existing workarounds all have drawbacks, from burdensome procedures used to compensate for spectral crosstalk, to the complete destruction of cells analyzed with mass spectrometry.

The SBIR award funded development of Kinetic River's "Arno" cell-analysis technology. The innovative *Arno* technology expands multi-parameter capabilities of flow cytometry while eliminating the need for compensation, yet it retains compatibility with cell sorting and a familiar workflow for the end user. Further, the simplified design reduces instrument footprint and complexity. By achieving all planned milestones, Kinetic River has paved the way for further development and commercialization of this technology.

"We are very pleased with the progress we have made," said Giacomo Vacca, Ph.D., president of Kinetic River. "Performing the CD4 assay for HIV monitoring—traditionally done using 4 detectors—using only 2 detectors was the clearest demonstration yet of the power of our technology. Now that we have shown that our approach works well on live cells, we are hard at work building an analyzer capable of handling all common assays—more simply, and in a smaller footprint, than is possible with traditional machines. We are very grateful for the opportunity that was afforded us by NIGMS and the SBIR program."

The first product version planned, *Arno-1*, is a 14-parameter analyzer (including forward and side scatter) using only 2 lasers, with no compensation required for overlapping fluor emission spectra. This analyzer will be compact, robust, and suitable as a laboratory workhorse for all common assays, as well as many assays of moderate complexity. A high-channel-count version of the *Arno* platform, *Arno-2*, is planned, with the ability to deliver 26 parameters using only 3 lasers. This will be aimed at immunophenotyping and similar applications with a need for a high degree of multiplexing.

### **About Kinetic River**

Kinetic River Corp. is a biophotonics design and product development company specializing in flow cytometry. Based in California's Silicon Valley, Kinetic River offers cutting-edge cell analysis instrumentation solutions, including the *Potomac* modular flow cytometer and the *Danube*, a fluorescence lifetime flow cytometer. Kinetic River also provides a range of expert witness services, training seminars, and technical consulting services to clients worldwide. For more information, visit [KineticRiver.com](http://KineticRiver.com).

**Contact:** Giacomo Vacca, President, Kinetic River Corp.; (650) 269-0726; [info@KineticRiver.com](mailto:info@KineticRiver.com)

Kinetic River® and the Kinetic River logo are registered trademarks of Kinetic River Corp.

Research reported in this release was supported by NIGMS of the National Institutes of Health under grant number 1R43GM123906-01.

The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.