



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

Completion is a milestone towards the automated removal of cellular autofluorescence in flow cytometry

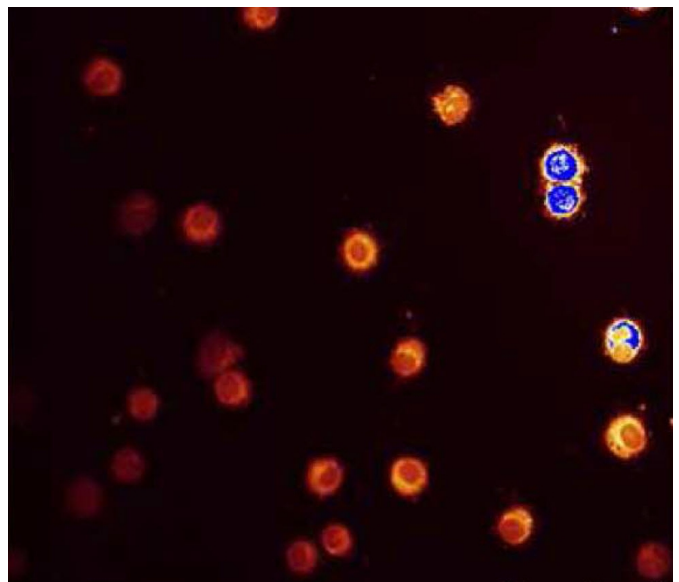
Mountain View, Calif., March 24, 2021 — Kinetic River Corp., a leader in custom flow cytometry instrumentation, announced today the successful completion of a Small Business Innovation Research (SBIR) project funded by the National Institutes of Health (NIH). The competitive Phase I grant was awarded to Kinetic River by the National Institute of General Medical Sciences (NIGMS), which fosters research focused on development of innovative biomedical diagnostic and therapeutic platforms.

Flow cytometry is a powerful cell analysis tool with broad utility in research and clinical fields as diverse and important as tumor biology research, cancer and AIDS diagnostics, immunophenotyping, and cancer immunotherapy. Flow cytometry relies heavily on adding fluorescent labels to cells. Accurate measurements of this externally added fluorescence is hindered by the presence of cellular autofluorescence, a nearly ubiquitous endogenous fluorescence inherent to the cells themselves.

The NIH SBIR award funded the development of Kinetic River's "Colorado" automated autofluorescence removal technology. Based on Kinetic River's patented time-resolved flow cytometry technology, the *Colorado* retains a familiar workflow for the end user, while delivering improved data. By achieving all planned milestones, Kinetic River has paved the way for further development and commercialization of this technology.

"We are thrilled to have hit all of our milestones," said Giacomo Vacca, Ph.D., president of Kinetic River. "Through a combination of hardware and algorithm development, we have been able to demonstrate the removal of the autofluorescence contribution from a population of exogenously stained eosinophils—a cell type with notoriously high autofluorescence signal. The ability to get cleaner signals from such cells will ultimately lead to higher quality data without altering the end-user workflow. We are grateful to NIGMS and the SBIR program for affording us this opportunity."

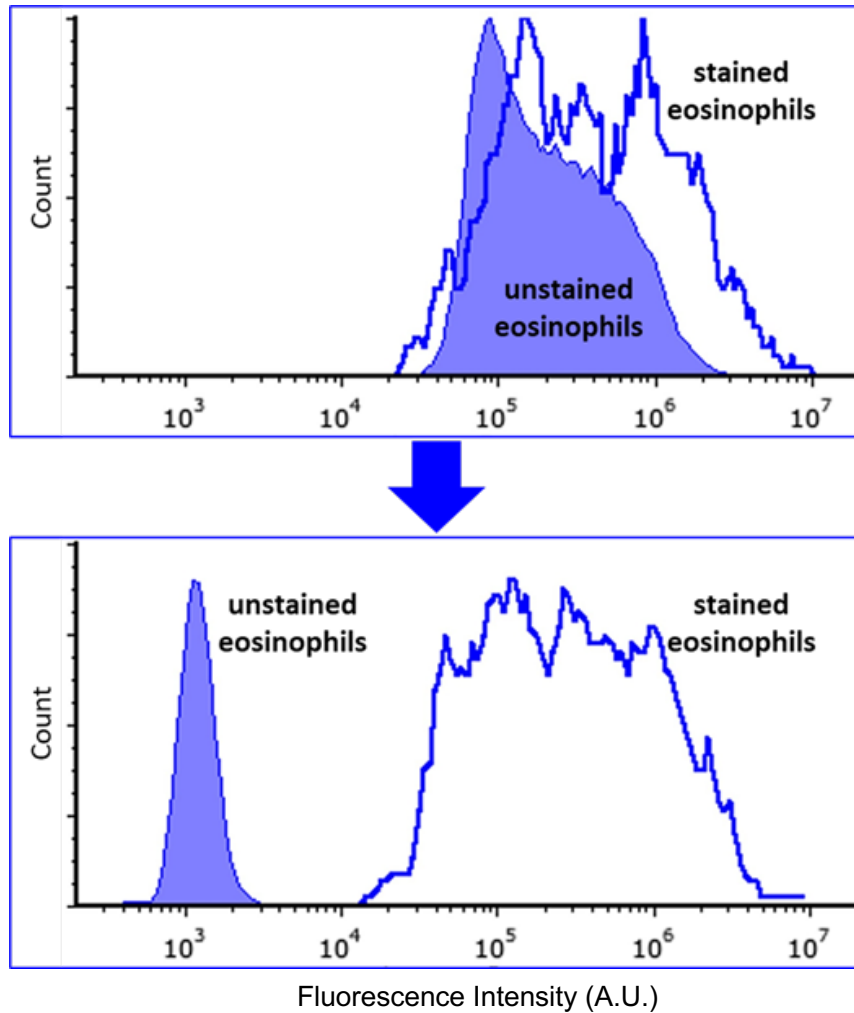
The successful Phase I program paves the way for further development and commercialization of a 4-laser, 16-channel *Colorado* instrument with fully automated removal of the contribution from cellular autofluorescence. This is the goal of a Phase II SBIR proposal recently submitted to the NIH.



Confocal microscopy shows intense autofluorescence of neutrophils from control mice, excited at 364 nm.

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Unstained and CD45-Alexa 405 stained human eosinophils without removal of autofluorescence (TOP) and with *Colorado* autofluorescence removal (BOTTOM). Cells were excited at 375 nm, emission was collected around 460 nm.

About Kinetic River

Kinetic River Corp. is a product design and development company focused on flow cytometry and optics. Based in California's Silicon Valley, Kinetic River offers cutting-edge instrumentation solutions for biomedical research and the life sciences, including the *Potomac* modular flow cytometer and the *Danube*, a fluorescence lifetime flow cytometer. Kinetic River also provides a range of technical consulting services and training seminars to clients worldwide. For more information, visit KineticRiver.com.

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