

# Ortho-Clinical brings new tech to world of medical diagnostics

By GINO FANELLI

Rolling out of Ortho-Clinical Diagnostics is a new slice of technology that will allow blood testing labs to run two tests at once.

The VITROS XT MicroSlide is a blood sample tool that utilizes Ortho-Clinical's Digital Chemistry, an optical system used for multitest processing in the company's VITROS XT 7600 system. In layman's terms, that means the system is capable of taking a blood sample and testing for triglycerides and cholesterol at the same time. A dry slide piece of equipment, the system requires a smaller blood sample from patients than traditional testing and no water or plumbing to operate.

"Groundbreaking VITROS XT MicroSlides harness the power of our proprietary MicroSlide technology, delivering high-quality test results and higher throughput, all within the lab's existing physical footprint," said Jennifer Paine, head of business fields at Ortho-Clinical, in a statement. "Performing two tests per slide reduces the sample volume over current technology. This approach allows timely reporting—especially important for complex, challenging or delicate patients."

While Ortho-Clinical is based in Raritan, N.J., the company's Global Center of Excellence for Research and Development calls Rochester home, employing 1,149 employees at a site near Long Pond Road and Ridgeway Avenue. Ragu Raman is head of research and development at the plant.

"This is a really unique and exciting time for us here at Ortho," Raman said. "It's unique because we have a very large amount of innovation happening on multiple fronts all at the same time."

The Ortho Vision platform, the company's fully automated blood analyzer, received FDA approval in 2015 and opened a wide range of doors for high-tech to come out of the company. In 2017, Ortho-Clinical received FDA approval for a new HIV test under the VITROS name with the ability to test for HIV-1 and HIV-2 simultaneously. The VITROS XT 7600 received clearance by the FDA last November.

Now with the new platform fully realized, Ortho-Clinical is working to see just how many different applications can be worked into it.

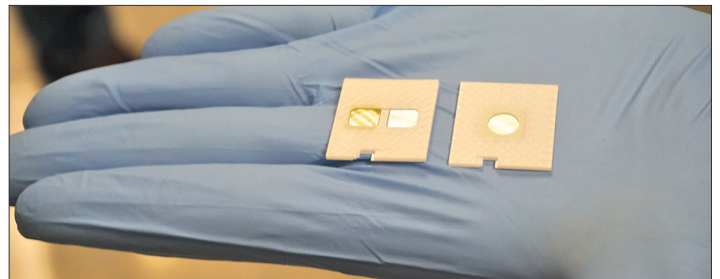
"A few years ago we launched a new platform that introduced imaging into our blood testing setup," Raman said. "This has been 10 years in the making for us. That's tremendous for an R&D person like me."

In 2014, the Carlyle Group acquired Ortho-Clinical from Johnson & Johnson for \$4 billion. While Carlyle announced an effort to sell the company for \$7 billion in 2017, Ortho-Clinical remains under ownership of the private equity firm.

Raman expects to see Ortho-Clinical's research and development team continue to grow as the VITROS XT platform finds more applications and that starts with the local talent pool in Rochester.

"We have a pretty solid talent pipeline that we get from the University of Rochester" and Rochester Institute of Technology, Raman said. "The folks who did our imaging algorithm actually graduated from the University of Rochester five or six years ago. We have a very vibrant talent pipeline."

Raman said Rochester's background as an imaging city factors heavily in the technology that can be built here. Likewise, the surrounding region, including Auburn and Syracuse, hosts potential partners in tech and manufacturing for Ortho-Clinical as it continues its development.



Provided photos

A gloved hand shows Ortho-Clinical MicroSlides.



A VITROS XT 7600 machine.

"We've done our new digital imaging system manufacturing in Auburn with a partner," Raman said. "So we do these things based on ... association with partners. Rochester is in a unique position with its history in optics, imaging and computing."

The VITROS platform carries with it a diverse stream of applications that is likely to expand in the future, including uses in lab automation, traditional blood testing and HIV testing among others. The MicroSlide system was officially submitted to the FDA on March 13.

Ortho-Clinical currently offers immune-hematology technology to blood banks, hospitals and clinics around the world. The MicroSlide and other pieces of the VITROS platform serve as important pieces to better serve those clients, Raman said.

"I think it's just the beginning," he said. "We've all seen what the transition from analog to digital has done for so many other industries," such as X-ray imaging, CT imaging and pathology. "The capabilities that digitalization gives us is very powerful, and we're just in the very beginning stages of this innovation."