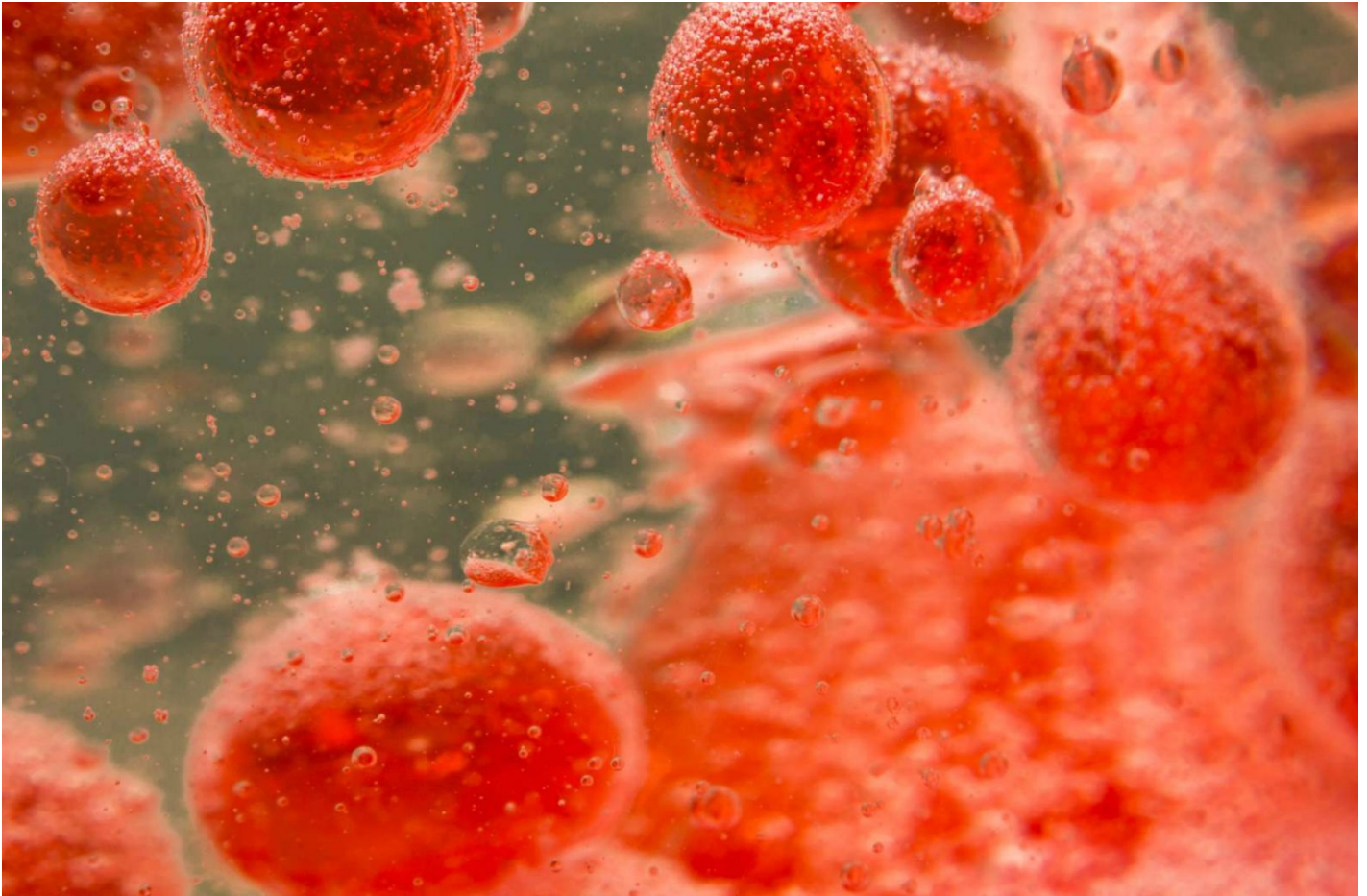


Medical Software Provides Blood Analysis At The Point Of Need

University of Virginia



The “Remote Automated Laboratory System” (RALS) was developed by a group of engineers and faculty in the Medical Automation Research Center at the University of Virginia (UVA) in Charlottesville, Va. RALS is an interactive, multi-station, medical specimen analysis system that analyzes specimens taken at remote locations, processes the data at a central laboratory, and transmits results back to those locations.

Engineers Robin A. Felder, Keith Margrey, Bill Holman, Jim Boyd, John Savory, and Antonio Martinez designed RALS to solve the challenges of delivering quality laboratory care at the point of need (typically a patient’s bedside). The UVA invested more than \$100,000 in developing and testing the system from 1985 to 1989.

“ Not only is RALS a software tool, but it also serves as a robotic system that automatically performs blood gas analysis. It connects patient blood testing in various locations around the hospital with the central laboratory, which allows laboratory professionals to assure the quality

| *of the testing being performed by nurses and other patient caregivers.*

The UVA licensed RALS to Medical Automation Systems in 1999. Point-of-care analytical instruments, which are often not equipped to communicate with a computer, can be connected to RALS through customized interfaces developed by Medical Automation Systems or the instrument manufacturer.

Since its inception, RALS has saved the UVA health system more than \$5 million by eliminating the need for a fully staffed laboratory near the patient's bedside.

This story was originally published in 2008.

To see available technologies from research institutions, click [here](#) to visit the AUTM Innovation Marketplace.

Share your story at autm.net/betterworldproject

#betterworldproject