

# BioExecutive™

## INTERNATIONAL

Building the New Biotech Leadership

# COMPANIES TO WATCH

*These are some companies that we think have really interesting stories to tell, so we want to introduce them to you. This is for your information only; it is not intended to tell you who to invest in or do business with.*

**Founded:** 2000  
**Locations:** South San Francisco, CA  
**Markets:** Transplantation management, immunology  
**Listings:** Privately held  
**Officers:** Pierre Cassigneul, president and CEO; Steven Rosenberg, PhD, CSO; Vikram Jog, CFO; Jay Wohlgemuth, MD, VP, clinical development; Tod Klingler, PhD, VP, informatics sciences; Tammy Reilly, VP, commercial operations; Judith Wilber, PhD, VP, technical operations  
**Website:** [www.xdx.com](http://www.xdx.com)

## ***XDx***

The CARGO study resulted in the identification and validation of gene expression patterns in peripheral blood that correlate with acute rejection. Using those genes, which encompass multiple biological pathways, the company developed a multi-gene test panel that can distinguish quiescence from acute rejection. The test uses real-time PCR expression measurement of a panel of genes derived from peripheral blood cells and applies an algorithm to the results. The algorithm outcome is a single score that considers the contribution of each gene in the panel. It correlates strongly to immune status and might also be able to predict the occurrence of future rejection and graft dysfunction. Validation studies of this test and algorithm are ongoing.

Cassigneul says the testing identifies at-risk patients that biopsies might miss, clarifies inconclusive biopsy results, and provides a more reproducible means to monitor patients. It is also less invasive than biopsy. The AlloMap testing provides information on the status of a patient's immune system that can help physicians make immunosuppressant treatment decisions. Immunosuppressive drugs minimize rejection, but they can cause serious adverse events. Doctors must find a balance that prevents both rejection and over-immunosuppression. XDx's testing can provide a longitudinal road map to permit doctors to determine how an individual patient's body is reacting to the heart transplant and immunosuppression over time.

**X**Dx has developed a technology that monitors patients' immune systems by measuring gene expression in their peripheral blood. It is one of the first commercialized practical applications built on insights from the Human Genome Project. The company's mission is to improve patient care by developing molecular diagnostics that translate an individual's immune status into clinically actionable information.

The company's AlloMap molecular expression testing is a noninvasive method to determine the risk of rejection in heart transplant recipients. It is currently in routine use in several major heart transplant centers. A second application of the AlloMap technology for lung transplant recipients is in clinical trials. The company is also working on one autoimmune disease application and plans to expand into rheumatoid arthritis, lupus, Crohn's disease, multiple sclerosis, and other autoimmune diseases, says Pierre G. Cassigneul, president and CEO.

The Cardiac Allograft Rejection Gene Expression Observational study (CARGO) was initiated in 2001 to study the utility of peripheral blood gene expression for cardiac transplantation acute rejection management. The study also evaluated gene expression testing in relation to clinical endpoints such as the development of graft dysfunction and the need for anti-rejection therapy.

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