

## New clinical test to predict lupus flares moves closer to the market

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A discovery made by Lupus Research Institute-funded investigator Emily Baechler Gillespie, PhD, at the University of Minnesota has been licensed to a major clinical laboratory for development and could soon result in a test that quickly and easily enables patients and their physicians to determine when a lupus flare is imminent.

Such a test is critical because there currently is no way to predict when a person with systemic lupus is shifting from a cycle of [remission](#), when the disease is relatively quiet, to a cycle of flare, when the disease is active and often very destructive. More than 1.5 million Americans and millions more worldwide suffer from the chronic and unpredictable autoimmune illness in which the body's immune system attacks otherwise healthy tissues and organs such as the joints, skin, heart, and kidneys.

"Through Lupus Research Institute support we ascertained that changes in certain levels of chemokines (proteins) could signal an increased risk of an imminent flare—which is information that could enable caregivers to minimize exposure to corticosteroids (prednisone) and also prevent or lessen flare intensity," said Dr. Gillespie.

It was in 2005 that the LRI took a chance on funding the innovative idea that certain chemokines in the blood might reveal activation of the [immune system](#) and signal impending flare. The grant to former University of Minnesota Professor Timothy Behrens (now at Genentech) was subsequently pursued by Dr. Gillespie, an assistant professor.

"This is one of numerous novel and out-of-the-box ideas that the LRI supported when no one else would take the risk," said LRI President Margaret Dowd. "And as documented in our recent LRI Impact Report (Driving Discovery Through Innovation), it's among the many key LRI-funded discoveries poised to significantly improve the lives of people with lupus."

Dr. Gillespie is among the 20 percent of LRI-funded investigators who already have moved their research discoveries from the bench to the clinic.

The University of Minnesota's Office for Technology Commercialization granted an exclusive license for the "flare prediction test" in October to Laboratory Corporation of America® Holdings (LabCorp®), which commercializes new diagnostic technologies.

In 2009 Dr. Gillespie reported that levels of chemokines measured at a single visit in 222 patients with mild to moderately active lupus were predictive of the development of a lupus flare over the course of the subsequent 12 months—and then more recently confirmed the findings in a larger group of patients.

In addition to helping to assess [lupus](#) activity and aid in making treatment decisions, the test also may be useful in predicting flares over shorter time windows, such as six or even three months, said Dr. Gillespie.

Testing for the chemokines will now be done in additional patients from multiple clinical sites around the country, explained Dr. Gillespie, and ultimately an interventional trial designed in which preventative treatments are used in an attempt to reduce the frequency and/or severity of flares in patients with elevated chemokine levels.

Provided by Lupus Research Institute

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