

# Fast Forward<sup>SM</sup>

## General Fund

This project is funded by Fast Forward, LLC, a nonprofit organization established by the National Multiple Sclerosis Society in order to accelerate the development of treatments for MS. Fast Forward will accomplish its mission by connecting university-based MS research with private-sector drug development and by funding small biotechnology/pharmaceutical companies to develop innovative new MS therapies and repurpose FDA-approved drugs as new treatments for MS.

<i>Primary Investigator</i> John Rose, MD Professor of Neurology University of Utah Salt Lake City, UT	<i>Project Title</i> MS Clinical Biomarker Validation	<i>Amount to be Committed</i> \$622,000 Term – 24 months
--	---	--

## About the Company

Lineagen, Inc., based in Salt Lake City, is committed to accelerating and enhancing the diagnostic evaluation of medical conditions so that the best possible outcomes can be achieved for patients and their families. Lineagen's first commercial offering, FirstStepDx, provides physicians with a fully integrated genetic testing, counseling, and developmental screening service to aid in the clinical evaluation of children with autism spectrum disorder and other forms of developmental delay. In addition to a deep commitment to autism, the company has ongoing scientific programs in the areas of multiple sclerosis and chronic obstructive pulmonary disease. The company aims to combine insight into clinical diagnostic pathways with proprietary and in-licensed research data, resulting in earlier, more personalized intervention and management for conditions where genetic susceptibility matters.

## Project Background & Goals

At this time, there are no symptoms, physical findings or laboratory tests that can, in themselves, determine if a person has MS. The doctor uses several strategies to determine if a person meets established criteria for a diagnosis of MS and to rule out other possible causes of whatever symptoms the person is experiencing. Researchers are eagerly pursuing the development of biomarkers – patterns of molecules visible in a blood test or spinal fluid test – that would aid diagnosis, and tell clinicians and their patients more precisely what to expect



# **Fast Forward**<sup>SM</sup>

## *General Fund*

during the course of their disease and how to best treat any individual. Lineagen has embarked on an MS biomarker discovery project in collaboration with the University of Utah, taking advantage of Lineagen's in-house data analysis capabilities and the university's clinical expertise in MS. Preliminary results have identified biomarker profiles that might be used to diagnose MS. In this project funded by Fast Forward, Lineagen is completing biomarker studies and attempting to validate the findings in a group of 500 people with MS and 500 controls without MS. The team will then test-drive, or further validate, the biomarkers in 200 people who are at risk for developing MS, and in 200 people who are newly diagnosed with MS.

If the biomarkers are confirmed, this exciting study may yield new information that helps to speed the diagnosis of MS. Earlier diagnosis would enable people to access disease-modifying therapies earlier in the disease course, which is the best way currently available to inhibit future disease activity. It is also possible that these findings may help to develop strategies for ending the disease forever.