

A New Award from MSCRF to Lentigen Technology, Inc. to Commercialize Curative Approaches for Sickle Cell Disease

Developing a new gene vector, and a point-of-care manufacturing platform, hematopoietic stem cells will be engineered as a means to treat sickle cell disease

GATIHERSBURG, MARYLAND, MD, UNITED STATES, June 5, 2026 /EINPresswire.com/ -- Lentigen Technology Inc., a Miltenyi Biotec company based in Gaithersburg MD, is pleased to announce the initiation of a new project in association with the

University of Maryland, Baltimore, and funded by the Maryland Stem Cell Research Fund (MSCRF). The MSCRF Commercialization program supports the development of new high-impact approaches to stem cell therapeutics that lead to the generation of new products. Lentigen Technology, a global leader in viral-based [gene vectors](#), has created a new GMP manufacturing

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Dr. Jean Yared

process for lentiviral gene vectors that uses a new binding protein (BaEV) to attach to and deliver therapeutic genetic payloads to human [hematopoietic stem cells](#). Focusing on developing cures for [sickle cell disease](#), this new approach will deliver a healthy version of the beta-globin gene, which is mutated in those suffering from sickle cell disease. By adding a non-mutated copy of the gene to bone marrow stem cells, this new therapy aims to provide patients with a disease-free life and a normal life span. To this day, patients with sickle cell disease suffer from painful and life-threatening vaso-occlusive events and have a much shorter lifespan.

In addition to the unique gene therapy vector, Lentigen, as part of the larger Miltenyi Biotec family of companies, is able to develop this approach on the CliniMACS®Prodigy device which



allows for point-of-care manufacturing for stem cell therapies. Rimas Orentas, PhD, the Principal Investigator on the project, which is entitled “Engineering Human Hematopoietic Stem Cells with a Novel Vector System to Enable Point-of-Care Gene Therapy for Sickle Cell Disease,” notes, “Despite recent scientific advances, current commercial approaches cost anywhere between \$2 million and \$3 million for the therapy alone. A key approach to driving down this cost will be the ability to manufacture cell and gene therapies right at the treatment center.”

MSCRF's 2nd-tier funding under the Commercialization grant program provides additional grant support to help companies collaborate with Maryland academic and research institutions, access specialized expertise, and advance product development toward commercialization and patient impact. Through this support, the company is collaborating with Dr. Jean Yared, M.D., Professor of Medicine at the University of Maryland School of Medicine and medical oncologist at the University of Maryland Greenebaum Comprehensive Cancer Center. Dr. Yared serves as the project's clinical lead and primary co-investigator and brings expertise in hematologic malignancies, bone marrow transplantation, and gene therapy for sickle cell disease and beta thalassemia. According to Dr. Yared, “While recently approved gene therapies have demonstrated that a cure for sickle cell disease is possible, significant barriers remain in cost, complexity, and accessibility. This MSCRF-supported collaboration will allow us to explore innovative strategies that could make transformative gene therapies more scalable, more affordable, and ultimately available to a larger number of patients living with this devastating disease.” The work will begin with pre-clinical modeling by Katharina Richard, PhD, an Assistant Professor of Microbiology and Immunology, and be validated for clinical translation by Kim Hankey, PhD, who leads therapeutic cell manufacturing in the Fannie Angelos Cellular Therapeutics Laboratory at the University of Maryland, Baltimore. The work will be managed by Kim Anthony-Gonda, PhD of CGT Consulting, LLC, a veteran leader in gene vector biology, in association with Lentigen.

The University of Maryland Medical Center is building a comprehensive Sickle Cell Disease Center of Excellence that will serve as a regional destination for advanced clinical care, research, transplantation, and gene therapy. As one of a select group of Qualified Treatment Centers (QTCs) authorized to deliver FDA-approved gene therapies for sickle cell disease and transfusion-dependent thalassemia, UMMC is uniquely positioned to lead the development of next-generation curative therapies and expand access to innovative treatments for patients throughout the region.

This new \$500,000 MSCRF grant will accelerate the development of a new commercial approach that will provide a more economical approach to providing curative therapies to sickle cell disease patients seen in Baltimore, and across the state. Benchmarking this manufacturing approach sets the stage for new global solutions for sickle cell disease, as well as other monogenic gene disorders that can be addressed by gene addition or correction.

About Lentigen Technology, Inc.

Lentigen Technology employs over 80 professional scientists in Gaithersburg, Maryland, and serves as a key research and development organization in the field of cell and gene therapy.

Lentigen supports research projects at major academic medical centers in Maryland, including multiple research projects at the NIH. Miltenyi Biotec acquired Lentigen Technology in 2014. In 2021, the lentiviral vector manufacturing business of Lentigen Technology was integrated into the new division Miltenyi Bioindustry to complete Miltenyi Biotec's CDMO services. Including Lentigen Technology, the Gaithersburg, Maryland location at 1201 Clopper Rd., employs over 380 people.

About Miltenyi Biotec

Miltenyi Biotec is a global provider of products and services that advance biomedical research and cellular therapy. The company's integrated tools support research at every level, from basic research to translational research to clinical application. Their technologies cover techniques of sample preparation, cell isolation, flow sorting, flow cytometry, cell culture, molecular analysis, and preclinical imaging. The company's more than 25 years of expertise spans research areas including immunology, stem cell biology, neuroscience, and cancer, and clinical research areas like hematology, graft engineering, and apheresis. Trusted around the world, the Miltenyi Biotec brand continues to set new standards in the industry. Miltenyi Biotec has more than 1,400 employees in 25 countries.

About Maryland Stem Cell Research Fund (MSCRF)

Established under the Maryland Stem Cell Research Act of 2006 and overseen by the Maryland Stem Cell Research Commission, the Maryland Stem Cell Research Fund provides competitive, non-dilutive funding to advance stem cell and regenerative medicine research and innovation in Maryland. MSCRF supports academic and industry projects across the development continuum, from discovery through clinical translation, commercialization, and manufacturing.

Website: www.MSCRF.org

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