Prime Medicine and Cimeio Therapeutics Announce Research Collaboration to Develop Prime Edited Shielded-Cell & Immunotherapy Pairs™ for Genetic Diseases, Acute Myeloid Leukemia and Myelodysplastic Syndrome

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-- Collaboration combines Prime Medicine's Prime Editing platform with Cimeio Therapeutics' Shielded Cell and Immunotherapy Pairs™ (SCIP™) platform --

-- Aim to reduce toxicity of conditioning regimens and introduce new therapeutic options that can expand the utility of hematopoietic stem cell (HSC) transplant and in vivo genetic therapies --

CAMBRIDGE, Mass. and BASEL, Switzerland, June 22, 2023 (GLOBE NEWSWIRE) -- Prime Medicine, Inc. (Nasdaq: PRME), a biotechnology company committed to delivering a new class of differentiated one-time curative genetic therapies, and Cimeio Therapeutics, a biotechnology company that is reinventing cell therapy through its leadership in the emerging field of epitope shielding, today announced a research collaboration to combine their respective technologies, including Prime Medicine's Prime Editing platform and Cimeio's Shielded Cell and Immunotherapy Pairs (SCIP) platform.

The goal of the research is to improve the safety and effectiveness of hematopoietic stem cell (HSC) transplants to treat genetic diseases, acute myeloid leukemia (AML), and myelodysplastic syndrome (MDS), as well as enable the *in vivo* selection of edited HSCs to potentially remove the need for transplantation entirely.

HSC transplant offers a potentially curative approach for many debilitating and life-threatening diseases, including malignancies such as AML and rare genetic diseases like Gaucher's and Hurler's, though its clinical utility is limited by the current need for myeloablative conditioning regimens and the risk of post-transplant progression of malignant disease. Cimeio's SCIP platform combined with Prime Editing may significantly improve the accessibility, eligibility and outcomes for patients who could benefit from HSC transplant. These combined technologies may also enable selection of *in vivo* edited HSCs, which could allow for the treatment of genetic diseases without a transplant.

Under the terms of the agreement, Prime Medicine will develop a Prime Editor for Cimeio's CD117 shielding variant that will then be evaluated by both companies. CD117 is a receptor tyrosine kinase expressed on normal HSCs and on leukemia cells, and therefore is an attractive target for an antibody-based conditioning therapy for patients needing a stem cell transplant, or for patients with AML or MDS needing new treatment options.

If the research collaboration is successful, the companies will grant exclusive license options to each other for their technology. Prime Medicine will receive an exclusive option to license Cimeio's cell shielding technology for CD117-shielded HSC transplant, as well as *in vivo* editing of CD117-shielded HSCs, for genetic diseases, not including Sickle cell disease. Cimeio will receive an exclusive option to license Prime Medicine's Prime Editing technology for its CD117-shielded allogeneic HSC product for use in AML and MDS, and, potentially, a second shielding protein for use in AML and MDS. If the companies exercise their exclusive license options, they will each be eligible to receive economics on net sales of licensed products. Specific financial terms were not disclosed.

Cimeio's proprietary investigational immunotherapies are designed to selectively deplete diseased HSCs, while its novel CD117 protein variant, which can be introduced into HSCs using Prime Editing, has the potential to protect the healthy transplanted HSCs from depletion, allowing them to engraft while maintaining the normal function of the CD117 receptor. Because the edited HSCs are shielded, the diseased HSCs can be more gradually depleted, which could reduce toxicity and increase safety. The immunotherapies can also be administered post-transplant with the potential to boost engraftment or treat minimal residual disease.

Prime Editing will be uniquely suited to introduce these novel protein variants into HSCs by virtue of its versatility, precision and efficiency, without causing double strand breaks and with minimal off target editing. Because Prime Editing can be multiplexed (i.e., multiple Prime Edits can be made with a single administration), rare genetic diseases such as beta thalassemia, immunodeficiencies and bone marrow failure syndromes may be corrected by Prime Editing at the same time as cell shielding, offering the possibility of autologous transplant for these patients without toxic conditioning.

"We believe Prime Editing is an incredibly powerful technology that could impact the care and treatment of a wide range of diseases. To fully exploit the potential of our technology, we are committed to collaborating with partners who can meaningfully expand our reach, accelerating our efforts to deliver important new medicines to patients worldwide," said Keith Gottesdiener, M.D., Chief Executive Officer of Prime Medicine. "Through this partnership, we are gaining access to a promising platform technology, which, when combined with Prime Editing, may allow many more patients to benefit from the potentially curative power of HSC transplant and, for the first time, make feasible *in vivo* treatment of many genetic diseases. We are delighted to collaborate with the Cimeio team, which includes experts in the fields of cell therapy, gene editing and HSC transplant, and look forward to working closely together to evaluate the synergistic potential of our technologies."

At the American Society of Hematology (ASH) Annual Meeting in December 2022, Cimeio presented results from a preclinical study demonstrating proof-of-concept for its CD117-shielded cells. The data showed that its shielded cells expressing a genetically engineered variant of CD117 were fully functional *in vitro* and contributed to engraftment *in vivo*, similar to unmodified HSCs expressing the wild-type receptor. Mice transplanted with a mix of human HSCs expressing either wild-type CD117 or the Cimeio shielded CD117 variant showed a selective depletion of wild-type CD117 cells following treatment with Cimeio's antibody directed against wild-type CD117, while those cells expressing the shielded CD117 variant were spared.

"Our recently disclosed data continues to show that our unique shielding technology and paired immunotherapies have the potential to deliver transformative therapies for patients with many types of diseases," said Thomas Fuchs, Chief Executive Officer of Cimeio Therapeutics. "Through this collaboration, we are bringing together industry leading protein engineering and genome editing, with the potential to deliver safer, curative therapies

for patients. Our aim is to eliminate the need for toxic chemotherapies and radiation, and enable new therapeutic approaches post-transplant. Our goal is to reinvent HSC transplant as a more effective and practical option for many more patients facing debilitating and fatal diseases. We look forward to partnering with the extremely talented team at Prime Medicine to advance our novel CD117 program."

About Prime Medicine

Prime Medicine is a leading biotechnology company dedicated to creating and delivering the next generation of gene editing therapies to patients. The Company is leveraging its proprietary Prime Editing platform, a versatile, precise and efficient gene editing technology, to develop a new class of differentiated, one-time, potentially curative genetic therapies. Designed to make only the right edit at the right position within a gene while minimizing unwanted DNA modifications, Prime Editors have the potential to repair almost all types of genetic mutations and work in many different tissues, organs and cell types.

Prime Medicine is currently progressing a diversified portfolio of eighteen programs initially focused on genetic diseases with a fast, direct path to treating patients or with a high unmet need because they cannot be treated using other gene-editing approaches. Over time, the Company intends to maximize Prime Editing's therapeutic potential and advance potentially curative therapeutic options to patients for a broad spectrum of diseases. For more information, please visit www.primemedicine.com.

About Cimeio Therapeutics

Cimeio is an applied gene editing and immunotherapy company developing a portfolio of Shielded-Cell & Immunotherapy Pairs™ (SCIP), which has the potential to transform hematopoietic stem cell transplant. Cimeio's technology platform is based on the design and expression of modified variants of naturally occurring cell surface proteins in HSCs. These novel variants maintain their function but are resistant to depletion when targeted by a paired immunotherapy which has high affinity for the wild-type version of these proteins. This technology has significant therapeutic potential, which Cimeio is using to develop curative treatments for patients with genetic diseases, hematologic malignancies, and severe autoimmune disorders. Shielded Cell and Immunotherapy Pairs and SCIP are trademarks of Cimeio Therapeutics AG. For more information, please visit www.cimeio.com.

Cautionary Note Regarding Forward Looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements about Prime Medicine's beliefs and expectations regarding: the research collaboration to combine Prime Medicine and Cimeio's respective technologies, including Prime Medicine's Prime Editing platform and Cimeio's SCIP platform, and the goals of such collaboration; the potential benefits of such collaboration and technology thereunder, including the ability to cure various diseases and replace existing treatments such as transplantation; and the exercise of the exclusive options and payment of economics. The words "may," "might," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" and similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks associated with: uncertainties related to the authorization, initiation, and conduct of preclinical and other development requirements for potential product candidates, including uncertainties related to regulatory approvals; risks related to the development and optimization of new technologies, the results of preclinical studies, or clinical studies not being predictive of future results in connection with future studies, including the Cimeio preclinical study presented at ASH; the scope of protection Prime Medicine is able to establish and maintain for intellectual property rights covering its Prime Editing technology; Prime Medicine's ability to identify and enter into future license agreements and collaborations; and general economic, industry and market conditions, including rising interest rates, inflation, and adverse developments affecting the financial services industry. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in Prime Medicine's most recent Quarterly Report on Form 10-Q, as well as any subsequent filings with the Securities and Exchange Commission. In addition, any forward-looking statements represent Prime Medicine's views only as of today and should not be relied upon as representing its views as of any subsequent date. Prime Medicine explicitly disclaims any obligation to update any forward-looking statements subject to any obligations under applicable law. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

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