



Prime Medicine Announces Addition of Capabilities to Prime Editing Platform

October 19, 2021

Company applauds recent advances and ongoing development of Prime Editing

Cambridge, Mass. —October 19, 2021—Prime Medicine, Inc., a company founded to deliver on the promise of Prime Editing, today announced the addition of capabilities to its platform based on recent scientific research.

“We are very excited to see improvements emerging that will further increase Prime Editing’s feasibility as a therapeutic approach,” said Keith Gottesdiener, MD, CEO of Prime Medicine. “These advancements, on top of an already groundbreaking foundational technology, are likely to increase the efficiency of Prime Editing, and will broaden the areas where Prime Editing might work, potentially extending our reach to additional diseases that no gene editing approach has yet been able to address.”

With these new advances made by external scientists, and with Prime Medicine’s ongoing efforts by its internal development team, the company expects to further optimize Prime Editing’s versatility, precision, and efficiency. Capabilities described in recent papers in *Nature Biotechnology* and *Cell* could enable the development of more efficacious therapeutics through improved gene editing activity.

One advance involves an optimized Prime Editing guide RNA (pegRNA). Prime Editing uses a pegRNA molecule to find the gene target and to direct the desired repair or edit. In a paper [published in Nature Biotechnology](#) on October 4, 2021, authors led by David R. Liu, one of Prime Medicine’s founders, showed that optimized, engineered pegRNAs (epegRNAs) can improve the efficiency of the editing process several-fold.

The company is also pursuing recently described strategies for improving efficiency by modulating a specific DNA repair pathway. In a paper [published in Cell](#) on October 14, 2021, authors led by Liu and Britt Adamson identified a specific DNA repair pathway, called the mismatch repair pathway, that powerfully enhances prime editing efficiency. They showed that editing activity could be increased several-fold, and undesired by-products could be decreased several-fold, by modulating the mismatch repair pathway through several approaches.

Prime Medicine holds commercial rights from the Broad Institute of MIT and Harvard to use Prime Editing for human therapeutic purposes, while scientists and companies around the world continue to make use of Prime Editing for research purposes and other applications.

About Prime Medicine

Prime Medicine, Inc. is a biotechnology company founded to deliver on the promise of Prime Editing, a versatile gene editing technology that can truly “search and replace” to restore normal genetic function and address the fundamental causes of disease. Prime Medicine envisions a world where Prime Editing can cure, halt, and ultimately prevent genetic diseases, providing lifelong benefit to patients and shaping the future of gene editing. For more information, visit www.primemedicine.com or [LinkedIn](#).

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