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Bayer and Mammoth Biosciences to Collaborate on Novel Gene Editing Technology

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- Agreement strengthens Bayer's new cell and gene therapy platform further
- Supports Mammoth's vision of unlocking the full potential of novel CRISPR systems
- Mammoth to receive upfront payment of USD 40 million, and potential future milestone payments of more than one billion USD upon successful achievement



BERLIN & BRISBANE, Calif.--(BUSINESS WIRE)--Bayer AG and Mammoth Biosciences, Inc., which is harnessing the diversity of nature to power the next-generation CRISPR products, today announced a strategic collaboration and option agreement for the use of Mammoth's CRISPR systems to develop *in vivo* gene-editing therapies.

Mammoth Biosciences' groundbreaking gene-editing technology is a key enabling technology, as well as a stand-alone therapeutic modality. It will significantly enhance Bayer's efforts to develop transformative therapies for patients faster and strengthen the company's recently established new cell and gene therapy platform. Under the terms of the agreement the two companies will start their collaboration with a focus on liver-targeted diseases.

"Bringing together Mammoth's novel CRISPR systems with our existing gene augmentation and our induced pluripotent stem cell (iPSC) platforms will allow us to unleash the full potential of our cell and gene therapy strategy," said Stefan Oelrich, Member of the Board of Management, Bayer AG and President of the Bayer's Pharmaceuticals Division. "Partnering with Mammoth's cutting edge scientific team is a fundamental pillar for our company to improve the lives of patients suffering from conditions that are currently still difficult to treat."

"We're excited to be working together with Bayer, building on the technology leap of our novel CRISPR systems, along with Bayer's expertise in successful drug development," said Dr. Peter Nell, Chief Business Officer and Head of Therapeutic Strategy at Mammoth. "This joint effort has the potential to benefit patients by developing CRISPR-based approaches for the clinic with the appropriate urgency, while ensuring scientific excellence and safety."

Cell and gene therapies are the next step in the evolution of drug development. By addressing the root cause of diseases, they are potentially capable of permanently reversing diseases with a one-time treatment. Gene editing serves as a key enabler for cell therapies when used outside the living body (*ex vivo*) and allows therapeutic targeting of a wide range of genetic diseases with a high unmet medical need when used inside the living body (*in vivo*).

Mammoth Biosciences' proprietary toolkit of ultra-small Cas enzymes, including Cas14 and Cas ϕ , allows for expanded high-fidelity gene editing to be combined with targeted systemic delivery. Under the agreement, Bayer gains access to this novel gene-editing technology, which offers the potential of an advanced *in vivo* applicability due to the ultra-compact size of these novel CRISPR systems.

Under the terms of the agreement, Mammoth Biosciences will receive an upfront payment of USD 40 million and is eligible to receive target option exercise fees as well as potential future payments in the magnitude of more than one billion USD upon successful achievement of certain research, development, and commercial milestones across five preselected *in vivo* indications with a first focus on liver-targeted diseases. In addition, Bayer will pay research funding and tiered royalties up to low double-digit percentage of net sales. The companies are also exploring work on *ex vivo* projects on a nonexclusive basis.

About Bayer

Bayer is a global enterprise with core competencies in the life science fields of health care and nutrition. Its products and services are designed to help people and planet thrive by supporting efforts to master the major challenges presented by a growing and aging global population. Bayer is committed to drive sustainable development and generate a positive impact with its businesses. At the same time, the Group aims to increase its earning power and create value through innovation and growth. The Bayer brand stands for trust, reliability and quality throughout the world. In fiscal 2020, the Group employed around 100,000 people and had sales of 41.4 billion euros. R&D expenses before special items amounted to 4.9 billion euros. For more information, go to www.bayer.com.

About Mammoth Biosciences

Mammoth Biosciences is harnessing the diversity of life to power the next generation of CRISPR products. Through the discovery and engineering of novel CRISPR systems, the company is enabling the full potential of its platform to read and write the code of life. Mammoth aims to develop permanent genetic cures through best-in-class *in vivo* and *ex vivo* therapies and to democratize disease detection with on-demand diagnostics. By leveraging its internal research and development and exclusive licensing to Cas12, Cas13, Cas14, and Cas ϕ , Mammoth can provide enhanced diagnostics and genome editing for life science research, healthcare, agriculture, biodefense and more. Based in the San Francisco Bay Area, Mammoth Biosciences is co-founded by CRISPR pioneer and Nobel Laureate Jennifer Doudna and Trevor Martin, Janice Chen, and Lucas Harrington. The firm is backed by top institutional investors including Redmile Group, Foresite Capital, Senator Investment Group, Sixth Street, Decheng, Mayfield, NFX, and 8VC.

Forward-Looking Statements

This release may contain forward-looking statements based on current assumptions and forecasts made by Bayer management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Bayer's public reports which are available on the Bayer website at www.bayer.com. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

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