Krystal Biotech Announces Publication in the New England Journal of Medicine on the Application of B-VEC to Treat Ocular Complications in Patient with Dystrophic Epidermolysis Bullosa

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• *Initial clinical data suggest the potential of B-VEC to treat lesions in the eye of DEB patients and additional applications of Krystal's HSV-1 platform to treat ocular diseases*

• Repeat administration of B-VEC eyedrops was well tolerated and associated with full corneal healing by 3 months as well as significant visual acuity improvement from hand motion to 20/25 at 8 months

• *Second* NEJM *publication of B-VEC clinical data adding to evidence of benefit for DEB patients in both skin and ocular tissue*

PITTSBURGH, Feb. 08, 2024 (GLOBE NEWSWIRE) -- Krystal Biotech, Inc. (the "Company") (NASDAQ: KRYS), a commercial-stage biotechnology company, today announced data on the compassionate use of beremagene geperpavec (B-VEC), administered as an eyedrop to treat a patient with dystrophic epidermolysis bullosa (DEB) with cicatrizing conjunctivitis has been published in the *New England Journal of Medicine* (*NEJM*). The full manuscript, titled "Ocular Gene Therapy in a Patient with Dystrophic Epidermolysis Bullosa," can be found in the February 8, 2024 issue of the *NEJM*.

Over 25% of patients with DEB develop ocular complications such as corneal erosions, abrasions, blistering and scarring that can lead to impaired vision. Disease management varies from supportive care and wound management to surgical interventions to remove scar tissue. No corrective therapy is presently available. The *NEJM* publication describes the first application of B-VEC to treat ocular complications in a patient with DEB under a compassionate use program.

"DEB is a devastating disease and patients with ocular complications have no corrective treatment options leaving them at risk of severe vision loss," said Alfonso L. Sabater, M.D., PhD, Associate Professor of Clinical Ophthalmology at the Bascom Palmer Eye Institute at the University of Miami Miller School of Medicine, and investigator. "We are encouraged by the improvements observed in the patient following B-VEC administration as an eyedrop directly to the affected eye and believe this data is supportive of further investigation in DEB patients with ocular complications. If approved, this approach could drastically benefit these patients."

A patient presented with severe cicatrizing conjunctivitis secondary to DEB. Surgical symblepharon lysis of the patient's right eye with pannus removal was conducted and regular administration of B-VEC as an eyedrop directly to the eye (5×10^9 PFU/mL) were added to routine post-surgical care, three times weekly for the first two weeks and then once weekly. B-VEC application frequency was further decreased to once monthly once the corneal epithelium was healed. B-VEC was well tolerated and associated with full corneal healing by 3 months as well as significant visual acuity improvement from hand motion to 20/25 at 8 months.

"We are excited by this initial data suggesting additional applications of our proprietary HSV-1-based gene therapy platform to treat ocular diseases, and we are working with the FDA to get B-VEC approved for the treatment of DEB patients with lesions in the eye," said Suma Krishnan, President, Research & Development, Krystal Biotech.

About Dystrophic Epidermolysis Bullosa (DEB)
DEB is a rare and severe disease that affects the skin and mucosal tissues. It is caused by one or more mutations in a gene called *COL7A1*, which is responsible for the production of the protein type VII collagen (COL7) that forms anchoring fibrils that bind the dermis (inner layer of the skin) to the epidermis (outer layer of the skin). The lack of functional anchoring fibrils in DEB patients leads to extremely fragile skin that blisters and tears from minor friction or trauma. DEB patients suffer from open wounds, which leads to skin infections, fibrosis which can cause fusion of fingers and toes, and ultimately an increased risk of developing an aggressive form of squamous cell carcinoma which, in severe cases, can be fatal.

Ocular complications are common in patients with DEB, with over half of the patients diagnosed with recessive DEB potentially affected. Typical ocular manifestations include corneal abrasion, as well as corneal scarring, pannus, eyelid ectropions and blisters.[1,2] There are no FDA-approved treatment options for ocular manifestations of DEB.[3]

About B-VEC and VYJUVEK
B-VEC is a non-invasive, redosable gene therapy built to deliver two copies of the *COL7A1* gene to treat DEB at the molecular level by providing the patient's cells the template to make normal COL7 protein, thereby addressing the fundamental disease-causing mechanism. VYJUVEK® is a topical formulation consisting of B-VEC mixed with a sterile gel that is applied directly to DEB wounds of the skin. In May 2023, the U.S. Food and Drug Administration (FDA) approved VYJUVEK for the treatment of DEB wounds. The FDA has not approved B-VEC for the treatment of DEB patients with ocular complications. For more information on VYJUVEK, see full U.S. Prescribing Information.

About Krystal Biotech's HSV-1 Based Platform
Krystal Biotech's patented HSV-1 based platform is based on engineered viral vectors that efficiently deliver therapeutic transgenes to cells of interest in multiple organ systems. The cell's own machinery then transcribes and translates the encoded effector to treat or prevent disease. Key differentiating features of the Company's HSV-1 based platform include a large genetic cargo capacity, a non-integrating DNA payload, broad cellular tropism, immune evasiveness which enables repeat dosing, and scalable manufacturing.

About Krystal Biotech, Inc.
Krystal Biotech, Inc. (NASDAQ: KRYS) is a commercial-stage biotechnology company focused on the discovery, development and commercialization of genetic medicines to treat diseases with high unmet medical needs. VYJUVEK is the Company's first commercial product, the first-ever redosable gene therapy, and the first medicine approved by the FDA for the treatment of dystrophic epidermolysis bullosa. The Company is rapidly advancing a robust preclinical and clinical pipeline of investigational genetic medicines in respiratory, oncology, dermatology, ophthalmology, and aesthetics. Krystal Biotech is headquartered in Pittsburgh, Pennsylvania. For more information, please visit http://www.krystalbio.com, and follow

@KrystalBiotech on LinkedIn and X (formerly Twitter).

Forward-Looking Statements
Any statements in this press release about future expectations, plans and prospects for Krystal Biotech, Inc., including statements about further investigation of B-VEC in DEB patients with ocular complications, the potential for additional applications of the Company's proprietary HSV-1-based gene therapy platform to treat ocular diseases, and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "likely," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: uncertainties associated with regulatory review of clinical trials and applications for marketing approvals, the availability or commercial potential of product candidates, the sufficiency of cash resources and need for additional financing and such other important factors as are set forth under the caption "Risk Factors" in the Company's annual and quarterly reports on file with the U.S. Securities and Exchange Commission. In addition, the forward-looking statements included in this press release represent the Company's views as of the date of this release. The Company anticipates that subsequent events and developments will cause its views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this release.

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2. Tong L, Hodgkins PR, Denyer J, et al. The eye in epidermolysis bullosa. *Br J Ophthalmol*. 1999 Mar; 83(3): 323-6. doi:10.1136/bjo.83.3.323.

3. Chen VM, Mehta N, Robbins CC, et al. Anterior-segment spectral domain optical coherence tomography in epidermolysis bullosa. *Ocul Surf.* 2020 Oct; 18(4): 912-919. doi: 10.1016/j.jtos.2020.08.010

Source: Krystal Biotech, Inc.