Krystal

Developing Genetic Medicines for Rare Diseases

November 2022

Forward Looking Statements

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This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Neither we nor any other person makes any representation as to the accuracy or completeness of such data or undertakes any obligation to update such data after the date of this presentation. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

Krystal Biotech Overview

A fully-integrated biotechnology company focused on developing and commercializing genetic medicines for patients with rare diseases

Developing redosable gene therapies – powered by a proprietary HSV-1 vector technology

Initial focus on rare dermatologic diseases established clinical POC and a growing pipeline across Krystal and Jeune[1]

Expanded focus on larger indications, new tissue types and alternative routes of administration

Fully integrated, R&D and commercial-ready company, with inhouse GMP manufacturing

Well funded with cash[2] of $407.0 million, providing runway through multiple clinical and commercial milestones

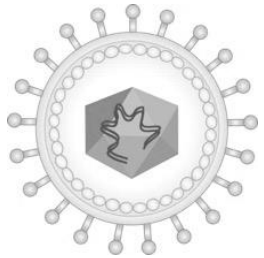
1. Jeune Aesthetics, Inc., a wholly owned subsidiary of Krystal Biotech; 2. Cash, cash equivalents and investments position as of 3Q 2022
HSV-1, herpes simplex virus type 1; POC, proof of concept; GMP, good manufacturing practice

Technology Platform

HSV-1: A Differentiated Vector

Vector addresses challenges related to host genome integration, neutralizing immunogenicity, and payload capacity

Wild-type HSV-1



HSV-1 has natural affinity for broad cell types with favorable properties

Gene Delivery Platform Comparison

	HSV-1	LV	AAV	LNP
In vivo dosing	**Yes**	No	Yes	Yes
Potential baseline neutralizing immunity	**No**	No (if ex vivo)	Yes	No
Repeat-dose capabilities	**Yes**	Yes (if ex vivo)	No	Yes
Carrying capacity	**>30 kb**	9 kb[7]	<5 kb[7]	~12 kb[8]
Integrates payload into host cell DNA	**No**	Yes	Maybe[9]	No
Efficiency of delivering genetic cargo	**High**	High	Variable	Low
Regulatory precedent	**Yes**	Yes	Yes	Yes

- HSV-1 is a well characterized virus, highly prevalent in the human population, with some estimates suggesting at least 67% of the US population ≥12yrs have been exposed to HSV-1[1]
- HSV-1 vectors efficiently infect cells; their genomes remain episomal without integrating into host DNA[2,3], thus avoiding risks of insertional mutagenesis
- Additional benefit of the HSV-1 vectors include large payload capacities exceeding 30 kb and its natural property to resist immune clearance[4-6]

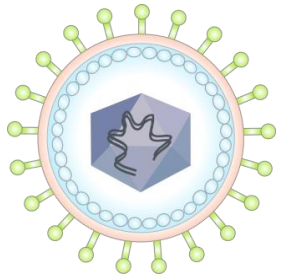
1. Xu F, et al. *J Infect Dis*. 2002;185(8):1019–24; 2. Heldwein EE, Krummenacher C. *Cell Mol Life Sci*. 2008;65(11):1653-68; 3. Goins WF, et al., Engineering HSV-1 Vectors for Gene Therapy, in Herpes Simplex Virus: Methods and Protocols, J.R. Diefenbach and C. Fraefel, Editors. 2014, Springer New York:New York, NY. p. 63-79; 4. Tognarelli EI, et al. *Front Cell Infect Microbiol*. 2019;9:127; 5. Yang L, et al. *Front Immunol*. 2019;10:2196; 6. Oldham ML, et al. *Nature*. 2016;529(7585):537-40; 7. Epstein AL, et al. *Curr Gene Ther*. 2005;5(5):445-58; 8. Generation Bio (GBIO) Prospectus. (2020, June 11); 9. Dalwadi, DA et al., *Mol Ther*. 2021; 29 (2): 680-690

AAV, adeno-associated virus; LNP; lipid nanoparticle , LV, lentivirus.

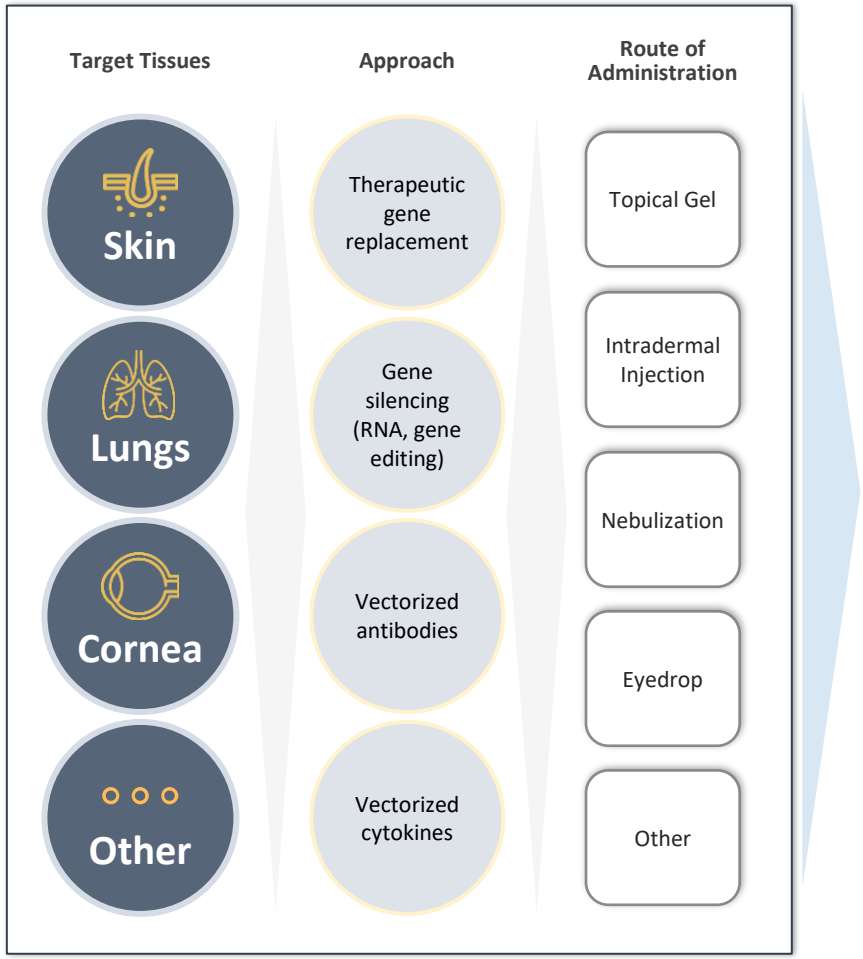
Redosable Gene Delivery Technology Has Broad Potential

Vector can deliver a variety of therapeutic modalities and be administered repeatedly

Engineered HSV-1 platform



The HSV-1 vector is engineered to be replication incompetent, thus further reducing cytotoxicity and the potential for cell to cell spread, while retaining the favorable properties of HSV-1, including immune-evasion, high payload capacity, and broad tropism.



Krystal

Rare diseases / conditions

- ✓ B-VEC (COL7A1) for DEB (BLA filed)
- ✓ KB105 (TGM1) for TGM1-ARCI
- ✓ KB407 (CFTR) for Cystic Fibrosis
- • KB104 (SPINK5) for Netherton Disease
- • KB408 (AAT) for Alpha-1 Antitrypsin Deficiency
- • Undisclosed preclinical candidates

JEUNE

Aesthetic skin conditions

- ✓ KB301 (COL3)
- • KB302 (COL1)
- • KB303 (ELN)
- • KB304 (ELN + COL3)
- • KB305 (COL4)

Collaboration Opportunities

Non-rare diseases / conditions

- • Chronic, non-monogenic diseases
- • Autoimmune skin or lung conditions
- • Vectorized antibodies or cytokines
- • Organ systems outside of Krystal's core focus

✓ In the clinic

All products described in this presentation are investigational therapies

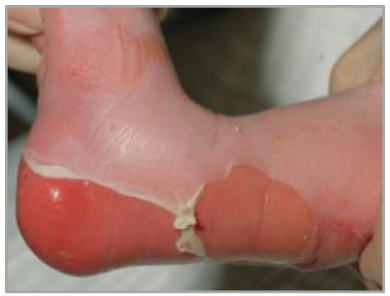
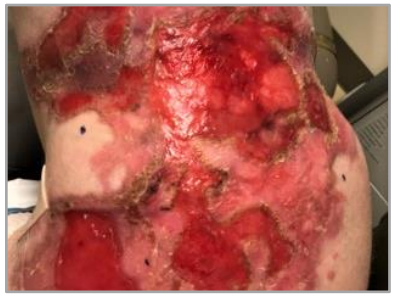
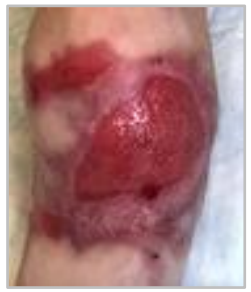
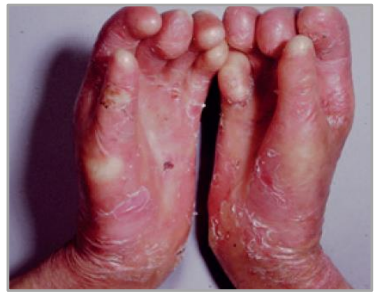
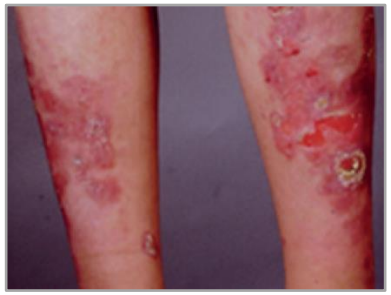
Beremagene Geperpavec (B-VEC)

RMAT/PRIME/Orphan/Voucher*

*RMAT: Regenerative Medicine Advanced Therapy Designation by the FDA; PRIME: PRIority Medicines designation by the EMA; Orphan: Orphan Drug designation by the FDA and Orphan Medicinal Product Designation by the EMA; Voucher: Rare Pediatric Disease designation may qualify for a voucher that can be redeemed to receive a priority review

Dystrophic Epidermolysis Bullosa (DEB)

"Butterfly Children" is often used to describe young DEB patients because their skin is as fragile as a butterfly's wings

Dystrophic Epidermolysis Bullosa

- DEB is a serious, ultra-rare genetic blistering disease caused by mutation in the COL7A1 gene[1-3]
- Mutations in the COL7A1 gene lead to absent or dysfunctional COL7 protein, without which the epidermis does not anchor to the dermis[1-3]
- DEB is characterized by a range of symptoms, including blistering (e.g., on the hands, feet, knees, elbows), wounds, scarring, nail, oral, and GI abnormalities. DEB is classified by inheritance pattern into 2 subtypes, the recessive DEB (RDEB), more severe form, and dominant DEB (DDEB)[1,4,5]
- Patients with DEB are at increased risk for serious complications, including aggressive squamous cell carcinoma[6-8]

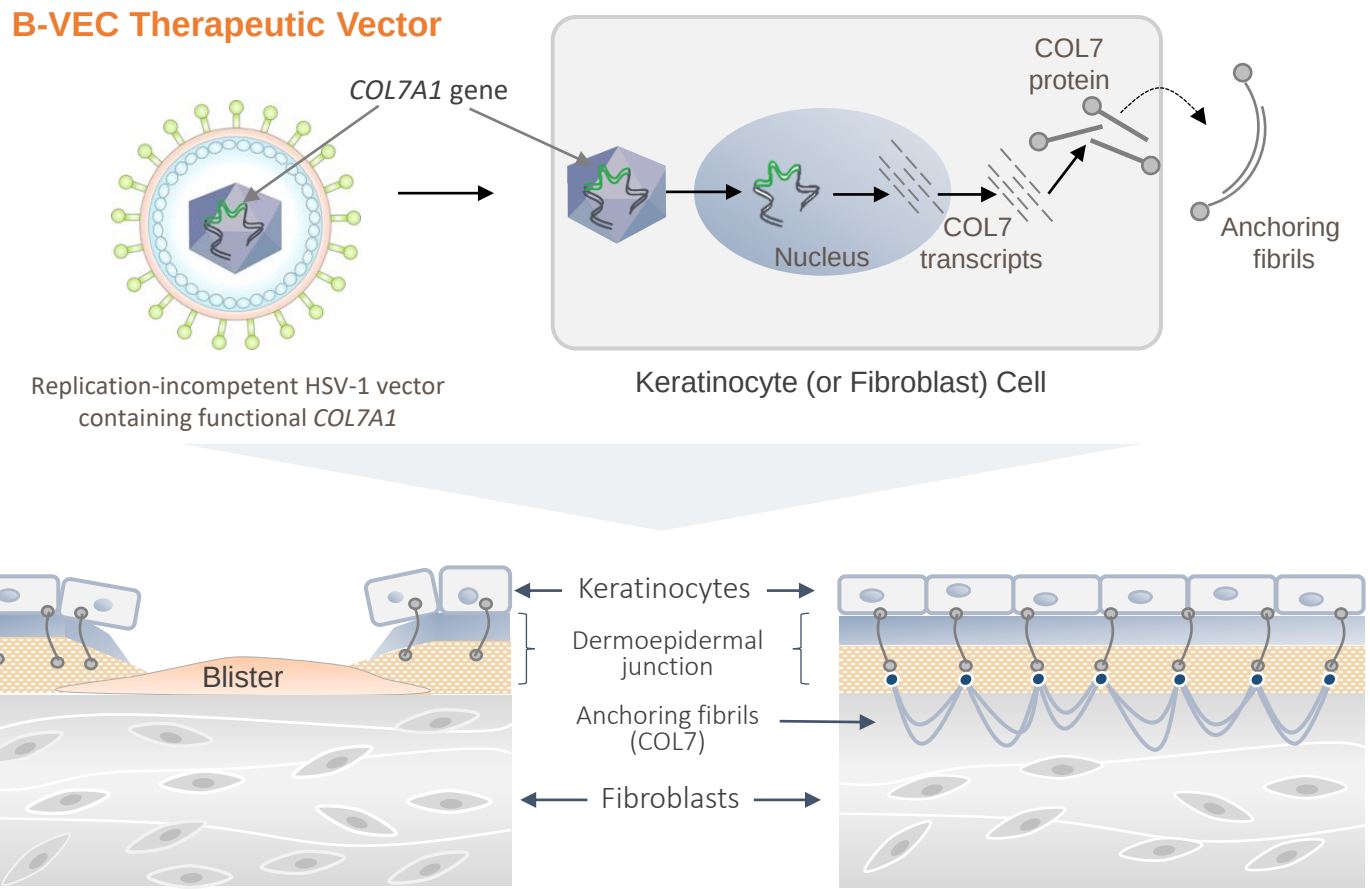
DEB is a lifelong condition, with clinical features and complications evolving from childhood through late adulthood[2,3]

1. Fine J-D, et al. *J Am Acad Dermatol*. 2014;70(6):1103-1126; 2. Fine J-D. *JAMA Dermatol*. 2016;152(11):1231-1238; 3. Bardhan A, et al. *Nat Rev Dis Primers*. 2020 Sep 24;6(1):78; 4. Has C, et al. *Br J Dermatol*. 2020;183(4):614-627; 5. Bardhan A, et al. *Nat Rev Dis Primers*. 2020;6(1):78; 6. Condorelli A, et al. *Int J Mol Sci.* 2019;20(22):5707; 7. Montaudié H, et al. *Orphanet J Rare Dis*. 2016;11(1):117; 8. Fine J-D, Mellerio JE. *J Am Acad Dermatol*. 2009;61:367-384

All products described in this presentation are investigational therapies

Beremagene Geperpavec (B-VEC) for DEB

Topically applied B-VEC gel designed to induce local COL7 expression and molecular correction



- Topically-administered B-VEC enters the compromised skin of DEB patients and transduces both keratinocytes and fibroblasts
- Once inside the nucleus, the vector genome is deposited episomally, allowing the cell to produce and secrete functional COL7 protein without host genomic disruption
- The secreted COL7 protein assembles into anchoring fibrils, which holds the epidermis and dermis together

All products described in this presentation are investigational therapies
COL7, type VII collagen; DEB, dystrophic epidermolysis bullosa. Krystal Biotech. Data on File.

B-VEC Opportunity

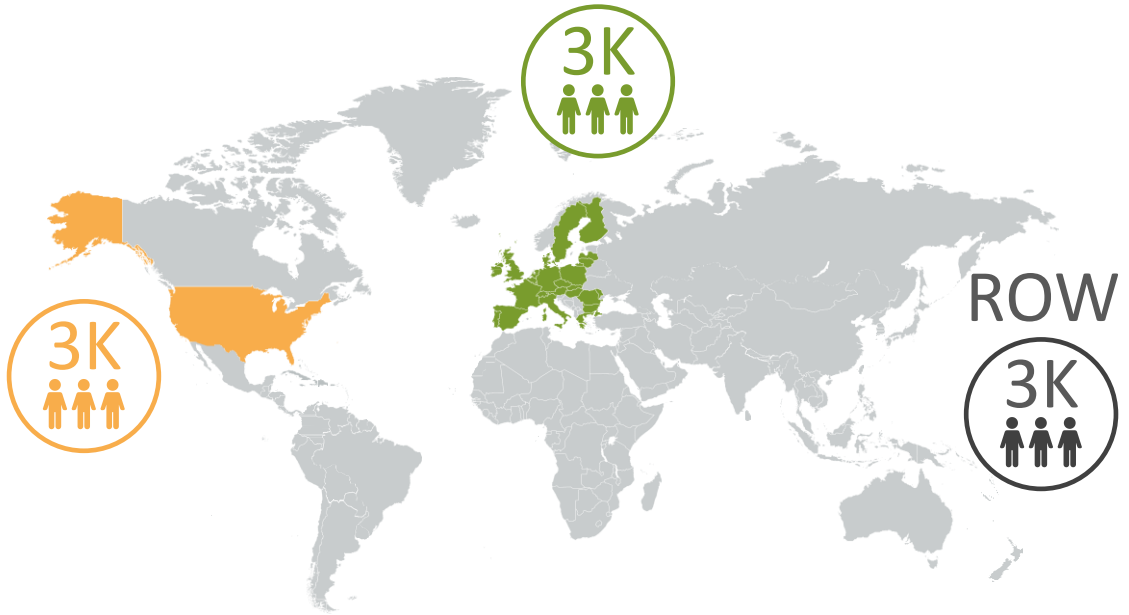
A topical redosable gene therapy intended to treat DEB

DEB is rare: **~9,000** patients across global reimbursable markets and **>2,500** patients diagnosed[1]

High unmet need: DEB has no approved treatments; current management is limited and supportive in nature[2,3]

Burden of existing treatment: supportive treatments can be time-consuming and costly, **$200k – $400k** annually[4,5]

Significant opportunity: DEB represents a **>$500M** global market



Global commercial & medical teams with deep expertise in rare diseases

1. Internal data on file; 2. Denyer J, et al. Accessed March 16, 2022. https://www.woundsinternational.com/download/resource/5921; 3. Bruckner AL, et al. *Orphanet J Rare Dis*. 2020;15(1):1; 4. Rashidghamat E., Mellerio J.E., Management of chronic wounds in patients with dystrophic epidermolysis bullosa: challenges and solutions, Chronic Wound Care Management and Research Volume 2017:4, 45-54; 5. GENEGRAFT Report Summary. (2015, February 16). Retrieved December 13, 2016, from http://cordis.europa.eu/result/rcn/156078_en.html

All products described in this presentation are investigational therapies

GEM-3 Pivotal Study Evaluated Weekly B-VEC*or Placebo in DEB

Demographics

- 31 patients, each with one primary wound pair were enrolled and included in the intent-to-treat (ITT) analysis
- Enrolled patients ranged from 1 year old to 44 years old at baseline; 61% of the patients enrolled were pediatric (≤18 years old)

Study conducted across 3 sites

Primary Efficacy Endpoints

- Complete wound healing† at Week 22 and Week 24; or at Week 24 and Week 26 (6-months)

Secondary Efficacy Endpoints

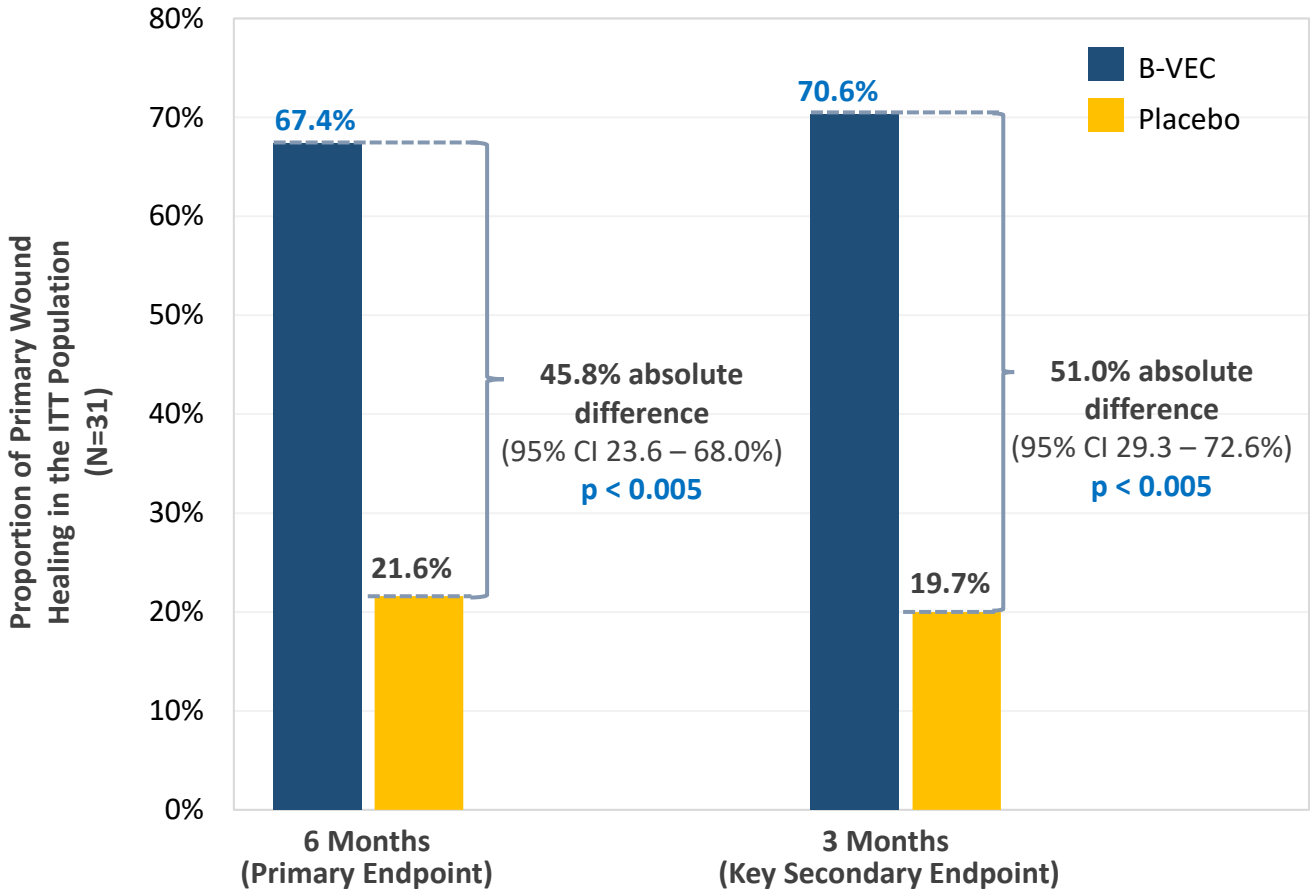
- Complete wound healing† at Week 8 and Week 10, or at Week 10 and Week 12 (3-months)
- Mean change in pain severity (VAS or FLACC-R Scale) associated with wound dressing changes

Marinkovich MP, et al. Oral presentation at 2022 American Academy of Dermatology (AAD) Annual Meeting.
*B-VEC, beremagene geperpavec; DEB, dystrophic epidermolysis bullosa
†Complete wound healing defined as 100% wound closure from exact wound area at baseline, specified as skin re-epithelialization without drainage

All products described in this presentation are investigational therapies

Significantly Greater Complete Wound Healing with B-VEC Treatment

Proportion of primary wounds with complete healing was significantly greater with B-VEC vs placebo



Durability of wound healing

- 49.7% of B-VEC treated wounds (N = 31) vs 7.1% of placebo treated wounds (N=31) demonstrated durability of response, defined as achieving complete wound healing at both 3 months (key secondary endpoint) and 6 months (primary endpoint)
- Nearly half of all B-VEC treated wounds demonstrated complete wound healing for three consecutive visits
- Of the total B-VEC wounds closed at 3 months, 66.7% (14/21) of B-VEC-treated wounds were also closed at 6 months, as compared to 33.3% (2/6) for placebo treated wounds

Marinkovich MP, et al. Oral presentation at 2022 American Academy of Dermatology (AAD) Annual Meeting.
Data as of database lock on 19Nov2021; data in figure based on ITT population (imputed); p-values and CIs are based on exact McNemar's test
B-VEC, beremagene geperpavec; CI, confidence interval; ITT, intent-to-treat

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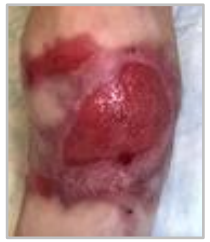
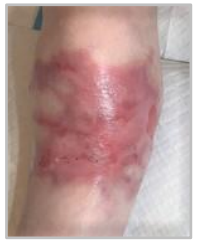
Wound Healing with B-VEC Treatment (Illustrative)

B-VEC

Knee

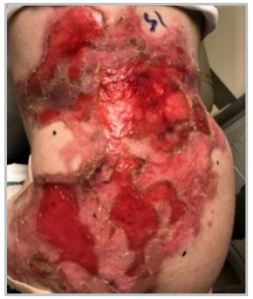


Baseline

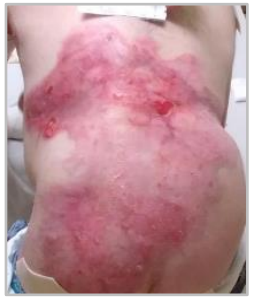


6 months

Large, chronic back wound



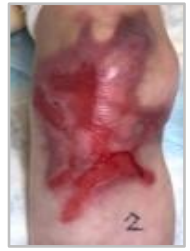
Baseline



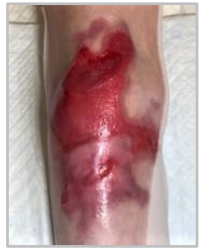
6 months

Placebo

Knee

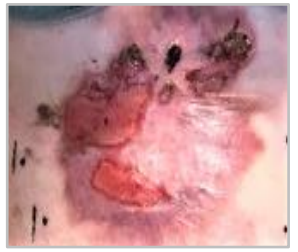


Baseline

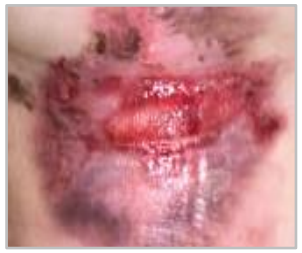


6 months

Sternum



Baseline



6 months

Marinkovich MP, et al. Oral presentation at 2022 American Academy of Dermatology (AAD) Annual Meeting.
All products described in this presentation are investigational therapies

Consistent Evidence of a Treatment Response with B-VEC across Subgroups

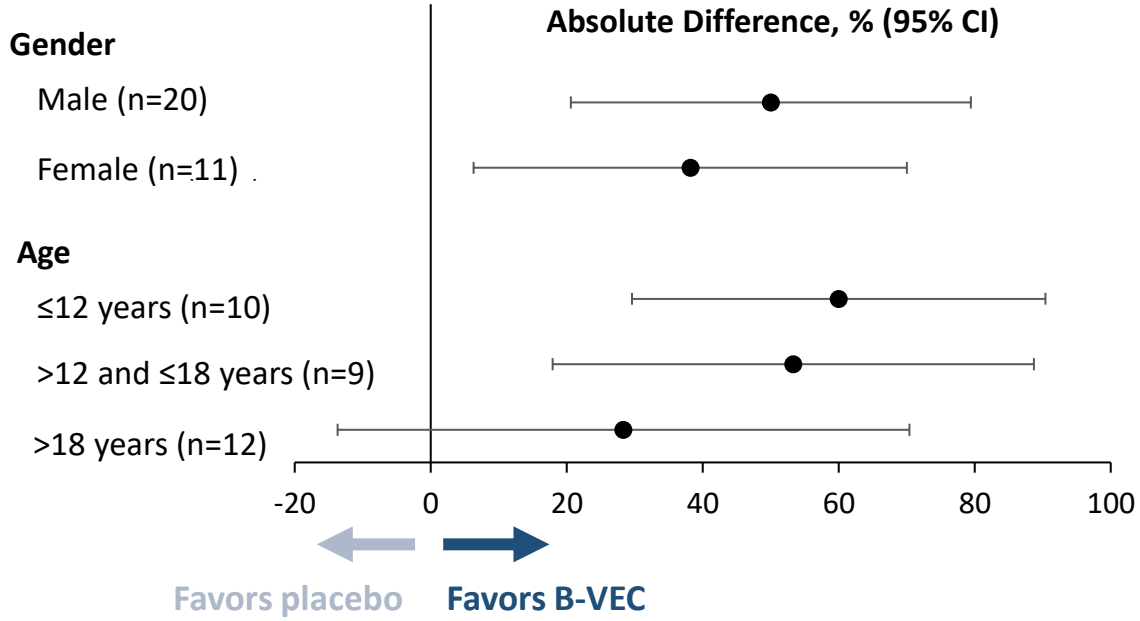
*Treatment response was in favor of B-VEC regardless of wound size, gender, and age**

Complete Wound Healing at 6 Months by Baseline Wound Size

Baseline primary wound area/size*	B-VEC		Placebo	
	N	Complete wound healing at 6 months, n (%)	N	Complete wound healing at 6 months, n (%)
<20 cm²	23	14 (60.9)	22	5 (22.7)
20 - <40 cm²	6	4 (66.7)	8	1 (12.5)
40 – 60 cm²	2	1 (50.0)	1	0 (0)

*In a small number of patients, the pre-defined threshold values for wound area/size category fell in between the size of the two wounds

Complete Wound Healing at 6 Months by Gender & Age



*Individual subgroups were not powered to demonstrate statistical significance
Marinkovich MP, et al. Oral presentation at 2022 American Academy of Dermatology (AAD) Annual Meeting.
Data as of database lock on 19Nov2021; data in figures based on ITT population (imputed); p-values and CIs are based on exact McNemar's test; gender and age subgroups were pre-specified
CI, confidence interval; ITT, intent-to-treat

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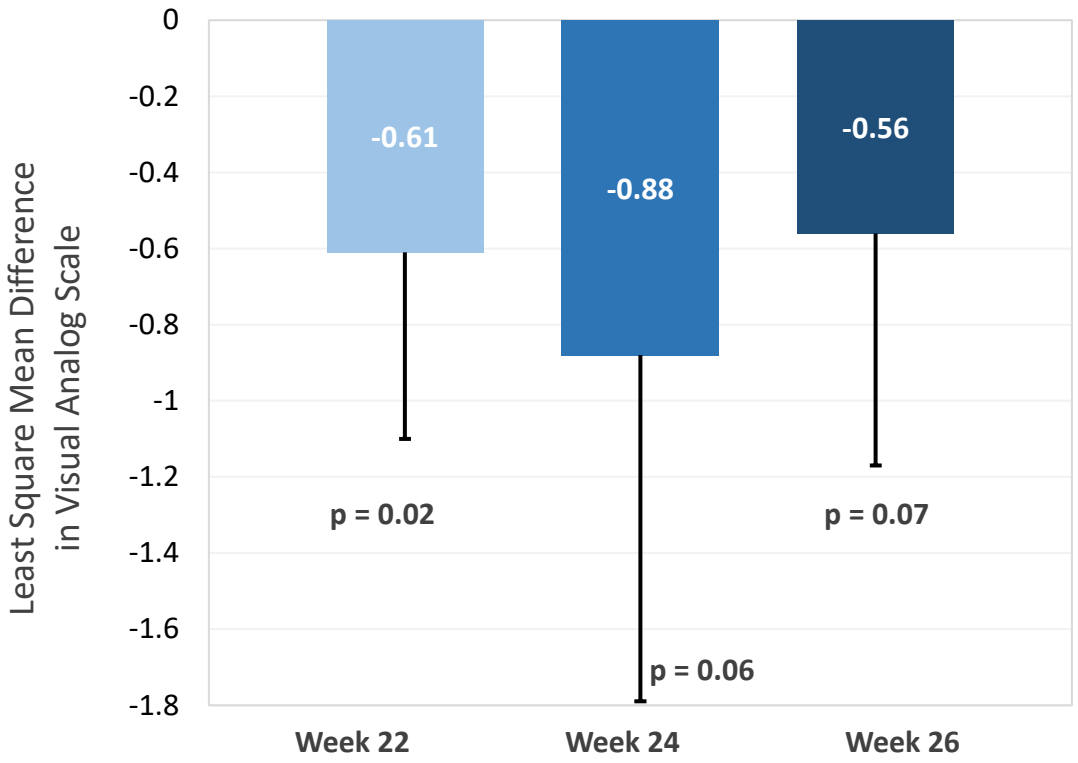
Pain and PRO Improvement Consistent with a Wound Healing Response

Change from Baseline in Pain following B-VEC Treatment



- Baseline VAS score of enrolled patients were approximately 2 to 3 on average
- A trend towards decreased pain in B-VEC treated versus placebo treated wounds was observed across Weeks 22, 24, and 26; improvement in pain was consistent with wound healing
- PRO measures (EQ-5D-5L and Skindex-29) assessed before and after treatment with B-VEC demonstrated improvement across multiple domains directionally, consistent with a wound healing response

Change from baseline in pain severity associated with wound dressing changes, as measured by Visual Analog Scale, at Weeks 22, 24, and 26 for the ITT population, ages 6 and above
Least square mean difference, 95% CI (shown as error bars), and p values were generated from analysis of covariance linear model with treatment and subject as the fixed effects and the baseline value as the covariate and change from baseline as the dependent variable

Marinkovich MP, et al. Oral presentation at 2022 American Academy of Dermatology (AAD) Annual Meeting.
Data as of database lock on 19Nov2021
B-VEC, beremagene geperpavec; PRO, patient reported outcomes; SD, standard deviation; VAS, Visual Analog Scale

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B-VEC was Generally Well-Tolerated

Adverse Events	Total Patients (n=31)
Total number of adverse events (AEs)	45
Patients with ≥ 1 AE, n (%)	18 (58.1)
Serious AEs	3 (9.7)
Severe AEs	2 (6.5)
Drug-related AEs	1 (3.2)
AE leading to treatment discontinuation	0 (0)
Death	0 (0)

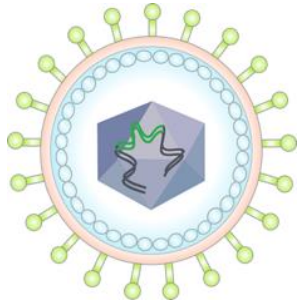
- The majority of AEs were mild; there were no AEs leading to treatment discontinuation or death
- One AE, mild erythema, was considered possibly related to study drug as assessed by the investigator
- Three patients experienced a total of 5 SAEs during the study: cellulitis, anemia (2 events), diarrhea, and positive blood culture
  - None were considered related to study drug
- No clinically significant immunologic reactions were reported during the study
- Treatment response to B-VEC was not associated with HSV-1 serostatus at baseline or with COL7 seroconversion

Marinkovich MP, et al. Oral presentation at 2022 American Academy of Dermatology (AAD) Annual Meeting.
Data as of database lock on 19Nov2021
AEs, adverse events; B-VEC, beremagene geperpavec; COL7, type VII collagen; HSV-1; herpes simplex virus type 1; SAEs, serious adverse events

All products described in this presentation are investigational therapies

GEM-3 Results Provide Clinical Validation of the Platform

Engineered HSV-1 Vector Platform



GEM-3 Study

Platform fully integrated from research to development to manufacturing to commercialization

1

Demonstrates B-VEC met the primary and secondary efficacy endpoints in complete wound healing for DEB

- Most advanced clinical application of platform

2

Validates therapeutic vector in dermatologic applications

- Skin pipeline covers rare and aesthetic conditions (via wholly owned subsidiary Jeune Aesthetics, Inc.)
- Potential to deliver diverse genetic cargo

3

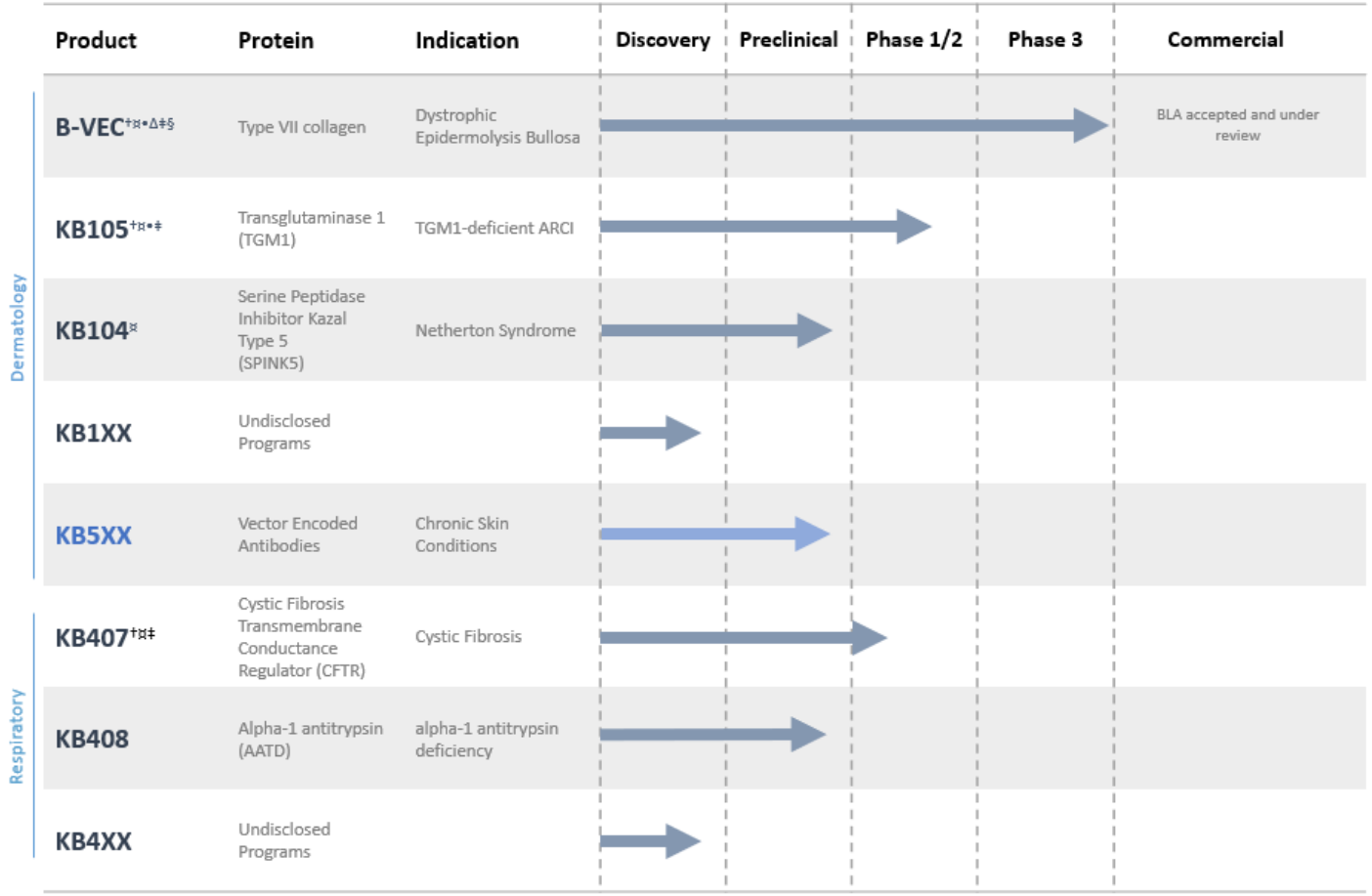
Validates therapeutic vector for broader redosable gene delivery

- Tropism to lung and additional types under exploration
- Potential to deliver diverse of genetic cargo with a variety of delivery mechanisms

All products described in this presentation are investigational therapies

Therapeutic Pipeline

Wholly-Owned Pipeline Spanning Dermatology & Respiratory Diseases



All pipeline compounds are investigational. All pipeline compounds are wholly owned.

†: FDA Orphan Drug Designation;
¤: FDA Rare Pediatric Disease Designation;
•: Fast-track Designation;
Δ: FDA RMAT designation;
‡: EMA Orphan Drug Designation;
§: EMA PRIME Designation.

Rare disease

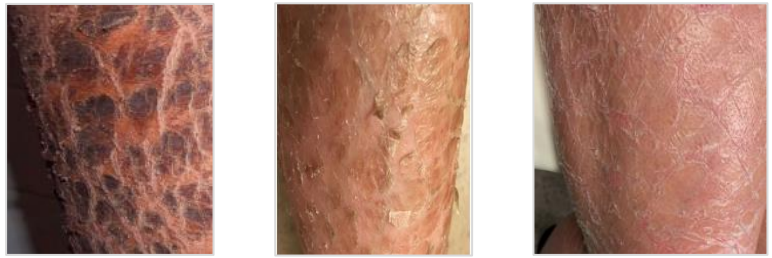
More prevalent conditions

Autosomal Recessive Congenital Ichthyosis Associated with TGM1 Mutations

Transglutaminase-1 deficiency is associated with increased mortality in the neonatal period

ARCI* Associated with TGM1

- The most common form of ARCI is caused by an inactivating mutation in the TGM1 gene encoding the enzyme transglutaminase-1, a protein that is essential for the proper formation of the skin barrier
- The condition is characterized by thick, dry, scaly skin, increased trans-epidermal water loss (TEWL), risk for dehydration, sepsis, and skin malignancies



High unmet need

- There are no approved treatments for ARCI associated with TGM1
- Topical and systemic retinoids and time-consuming supportive treatments (up to 4 hours a day of skin care) are most often used

Epidemiology[1-7]

Prevalence: There are approximately 20,000 people affected by TGMI related ichthyosis worldwide (~1,800 US; 3,000 EU; 18,000 ROW)

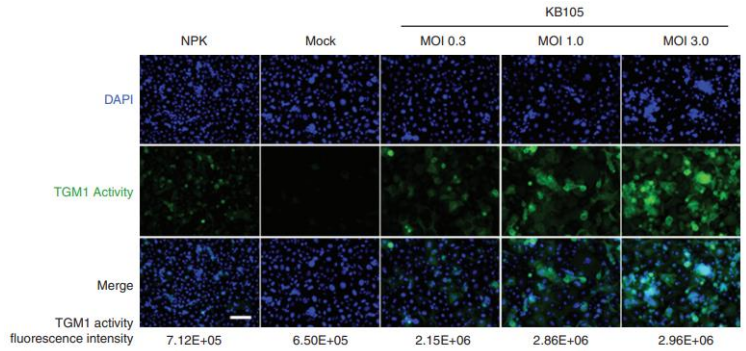
Incidence: It is estimated that around 350-400 babies are born with the condition each year, worldwide

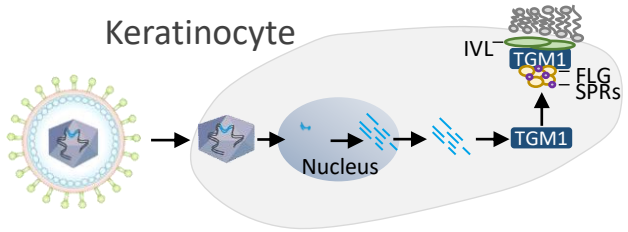
*ARCI, autosomal recessive congenital ichthyosis

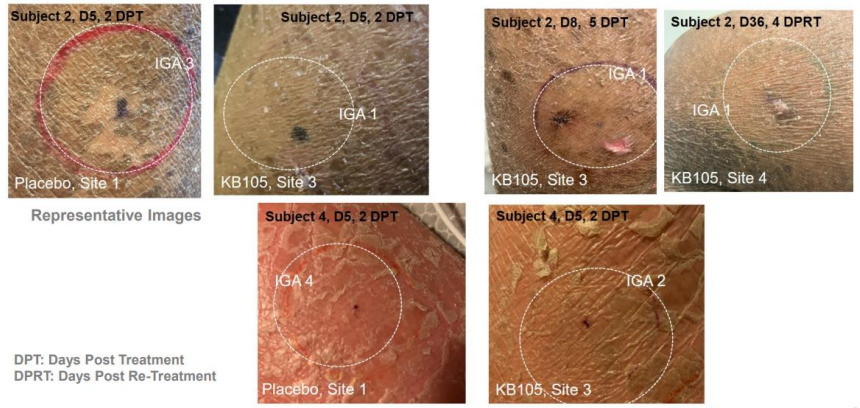
1. Rodriguez-Pazos L, et al. *Actas Dermosifiliogr.* 2013;104(4):270–84; 2. Dreyfus I, et al. *Orphanet J Rare Dis.* 2014;9:1; 3. Hernandez-Martin A, et al. *J Am Acad Dermatol.* 2012;67(2):240–4; 4. Pigg M, et al. *Eur J Hum Genet.* 1998;6(6):589–96; 5. Pigg M, et al. *Acta Derm Venereol.* 2016;96(7):932–37; 6. Foundation for Ichthyosis & Related Skin Types (FIRST); 7. National Organization for Rare Disorders (NORD).

KB105 for TGM1 Associated ARCI

Topically applied gel that delivers functional human TGM1 to keratinocytes







KB105 in immortalized TGM1-deficient patient-derived keratinocytes[1]

- A dose-dependent increase in TGM1 enzymatic activity was observed in KB105-infected cells by immunofluorescence
- TGM1-mediated peptide cross-linking in infected cells surpassed the levels of endogenous TGM1 activity in normal primary keratinocytes

Topical KB105 delivers functional TGM1 locally and preliminary Phase 1/2 results encouraging[2]

- KB105 transduced cells produce functional TGM1 protein that localizes to the cell membrane
- TGM1 catalyzes the covalent cross-linking of different cornified envelope proteins in the stratum corneum, also known as the skin barrier, therefore molecularly correcting the defect
- In Phase 1 study, KB105 treatment restored functional TGM1 protein expression and activity in all treated sites; KB105-expressed TGM1 was correctly localized in the epidermis
- Phenotypic evaluation limited by small treatment areas, but KB105 treated areas showed reduced reversion to ichthyotic scaling phenotype
- No drug-related AEs noted; No HSV or TGM1 antibodies throughout the study

1. Freedman JC, et al. *J Invest Dermatol*. 2021;141(4):874-882; 2. Paller A, et al. Oral presentation at Society for Investigative Dermatology (SID) 2020 Annual Meeting. Virtual. May 13-16, 2020.

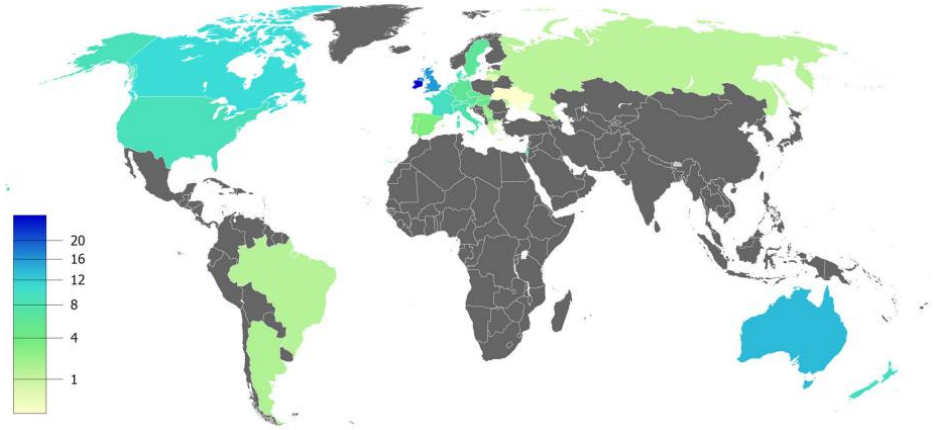
All products described in this presentation are investigational therapies

Cystic Fibrosis: Significant Unmet Need Despite Recent Approvals

Approximately 10% of CF patients have mutations that are not amenable to current small molecule approaches

Cystic Fibrosis

- Known as a life-threatening inherited disease, with an incidence of ~1/2,500 live births, affecting ~80,000 people worldwide[1]
- It is autosomal recessive, caused by mutations in the cystic fibrosis transmembrane conductance regulator (CFTR), leading to reduced and/or loss of CFTR function[2-4]
- Progressive lung disease is the primary cause of morbidity and mortality where the loss of CFTR-mediated chloride and bicarbonate transport leads to airway mucus obstruction, recurrent bacterial infection, and inflammation[5]



Estimated prevalence of cystic fibrosis per 100,000 habitants[6]

Unmet need remains significant despite recent approvals

- Small molecule correctors work by improving the functions of mutated CFTR; however, they only restore ~50% of protein function in patients with certain amenable mutations
- These therapies are ineffective in the ~10% patients with mutations that do not produce any CFTR protein (null mutations)
- Suboptimal efficacy or tolerability issues remain even in those responsive to therapies

CF Prevalence & Incidence[1,6,7]

~80,000 patients with CF worldwide

~30,000 patients in US CF registry

~1,000 new cases of CF diagnosed each year in the US

1. Middleton PG et al., *NEJM* 2019;381(19): 1809-1919; 2. O'Sullivan BP et al., *Lancet* 2009;373:1891-904; 3. Elborn JS et al., *Lancet* 2016; 388:2519-31; 4. Sanders DB et al., *Pediatr Clin North Am* 2016;63:567-84; 5. Stoltz DA et al., *NEJM* 2015, 372 (4): 351-362; 6. Lopes-Pacheco M, Front. *Pharmacol*. 2016; 7:275; 7. US Cystic Fibrosis Foundation.

All products described in this presentation are investigational therapies

KB407 for Cystic Fibrosis (CF)

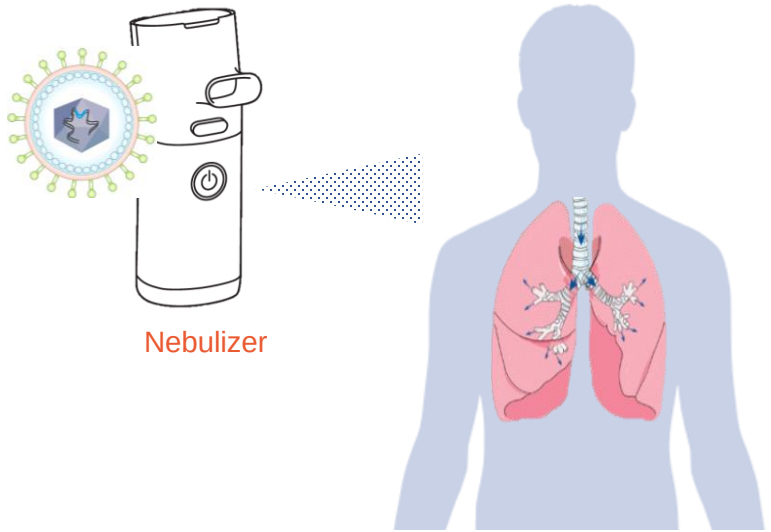
An inhaled gene therapy designed with the ability to redose

Gene therapy targeting CF

- Extensive effort with gene therapies have been explored spanning decades, with both viral (adenovirus and AAV) and non-viral (DNA plasmids and stabilized mRNA) approach
- Late-stage success remains elusive; challenges include physical limitations for large cargo, low efficiency of gene transfer, toxicity, immune intolerance, product instability, and burdensome delivery

KB407 characteristics

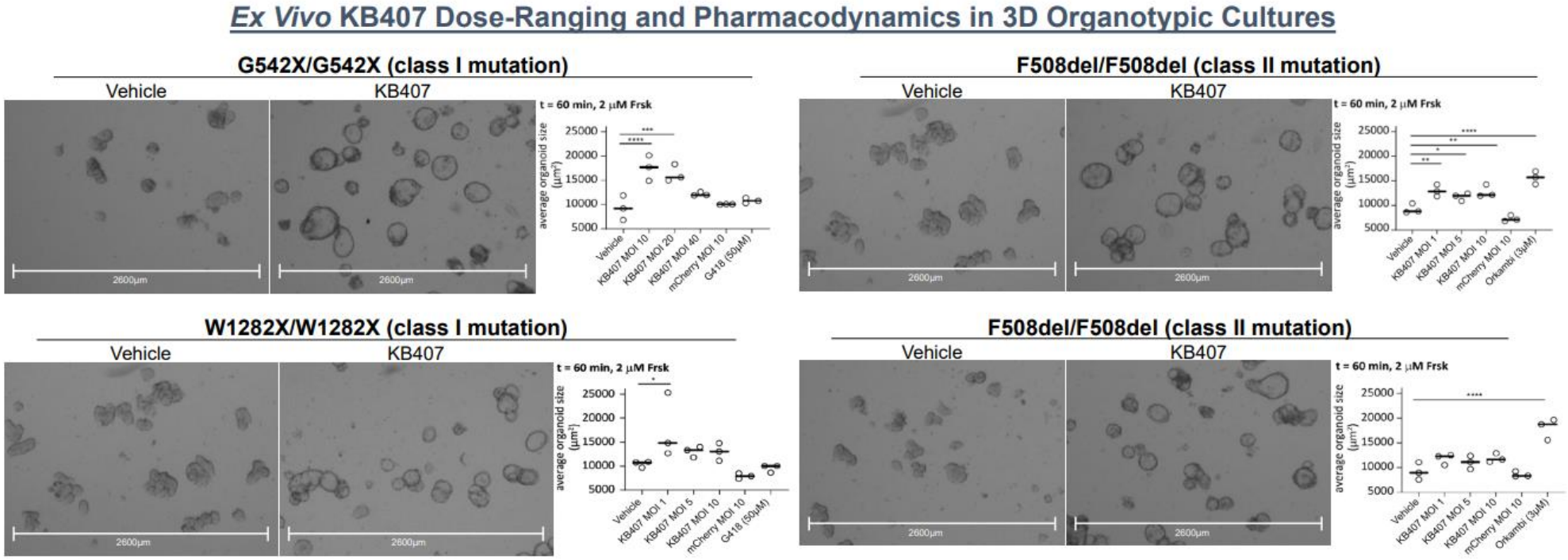
- Replication incompetent HSV-1 delivers two copies of full length, human *CFTR*
- Duration of nebulization expected to be <30 minutes, using a commercially available nebulizer
- Episomal delivery of *CFTR* gene does not disrupt cell DNA
- Ability to redose and/or adjust dose over time as lung cells turnover



All products described in this presentation are investigational therapies

KB407 Corrected *CFTR* Defect in 3D Patient-Derived Intestinal Organoids

Restoration of normal cystic organoid morphology occurs irrespective of underlying CFTR mutation



- Transduction by KB407 leads to a restoration of normal cystic organoid morphology even at the lowest MOI tested within 24 hours of infection, irrespective of the underlying *CFTR* mutation
- KB407 also found to transduce primary CF patient derived small airway epithelial cells in a dose-dependent manner; the vector efficiently produces functional, full-length CFTR protein that properly traffics to the cell membrane

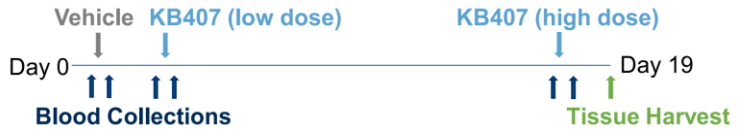
Freedman C, et al. Poster at the ASGCT 2020 Annual Meeting. Virtual. May 12-15, 2020; Krystal Biotech. Data on file.
MOI, multiplicity of infection

All products described in this presentation are investigational therapies

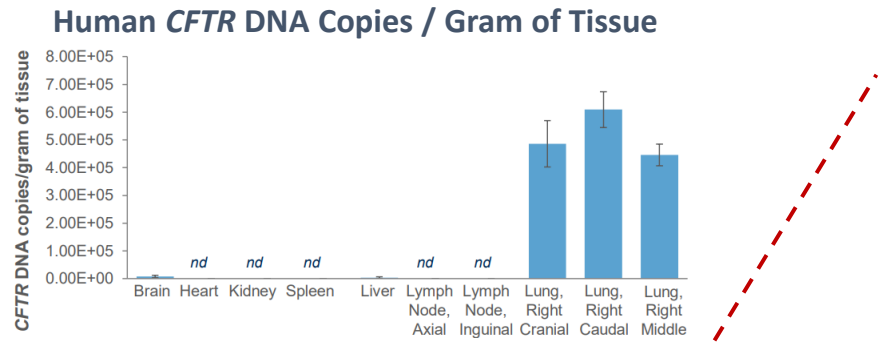
Pilot KB407 Non-Human Primate (NHP) Study: Human *CFTR* ≥ NHP *CFTR*

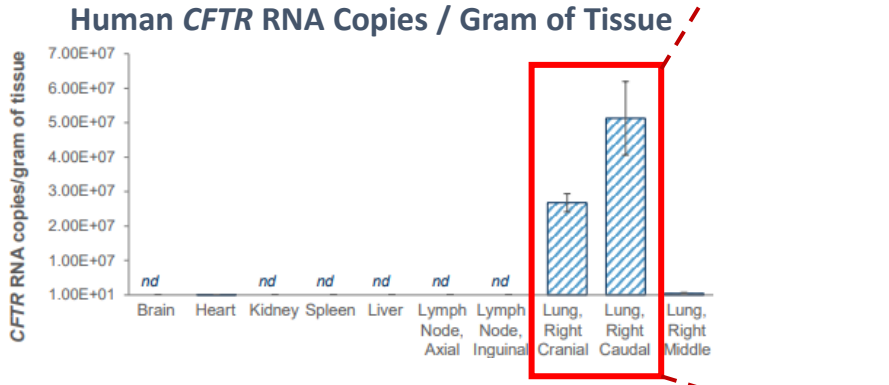
Confirmed KB407's CFTR payload transcribed in NHP lung with RNA levels at or exceeding endogenous CFTR

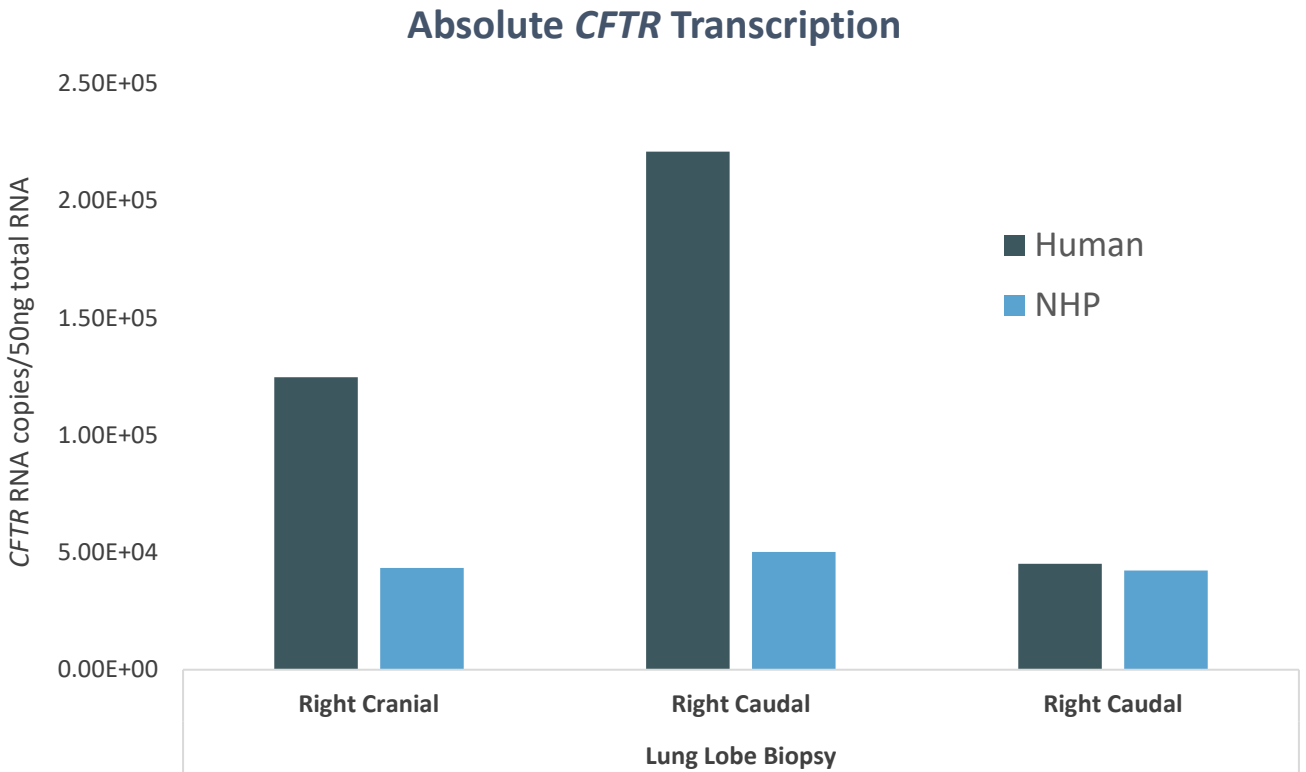
Pilot NHP Study Design



- Absolute quantification of exogenous human *CFTR* transcripts in multiple lung tissue biopsies were found to be 106%-440% of the endogenous levels observed in otherwise healthy primate airways







Parry T, et al. Abstract #655 at the 2022 North American Cystic Fibrosis Conference (NACFC). November 3-5, 2022.

All products described in this presentation are investigational therapies

Repeat Dose GLP IND-Enabling Toxicology Study in NHPs

*Repeat dose of KB407 well tolerated and broadly distributed throughout lung tissue in NHPs**

Study Design

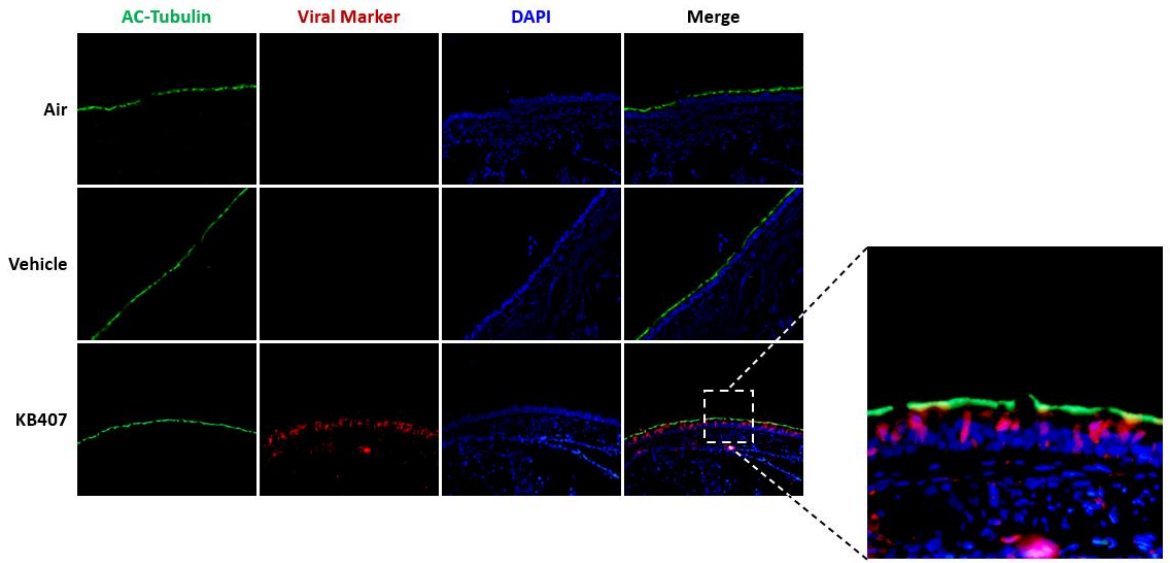
Group	n	Avg. Dose Deposited in Lungs (PFU/administration)	Dosing Days	Necropsy Days
Air	6	-	1, 8, 15	16
Vehicle	10	-	1, 8, 15	16, 43
Low Dose KB407	10	$1.81x10^8$ (male) $2.33x10^8$ (female)	1, 8, 15	16, 43
High Dose KB407	10	$1.43x10^9$ (male) $2.11x10^9$ (female)	1, 8, 15	16, 43

Toxicology: NOAEL determined to be high dose

- No toxicity based on mortality, cage side/clinical observations, body weights, pulmonary function, and pathology
- Effects considered non-adverse due to the mild severity, lack of impact on health, and reversible on recovery

Biodistribution: Broad distribution and sustained expression in NHP lungs

- A significant percentage of airway epithelial cells KB407+ positive by microscopy; quantification based on 10 fields of view, high dose group, lungs collected on Day 16, one day after last dose
  - **59.6%** (n = 298/500) of ciliated cells (AC-Tubulin+) were KB407+ ***representative image below***
  - **17.4%** (n = 38/218) of club cells (SCGB1A1+) were KB407+
  - **8.0%** (n = 8/100) of goblet cells (MUC5AC+) KB407+
  - Only 20.6% of KB407+ cells were also CD163+ suggestive of limited macrophage uptake
- Human *CFTR* expression also detected in lungs harvested on Day 43, 28 days after last dose



* KB407 IND accepted Q3 2022. Clinical data expected in early 2023.

Parry T, et al. Poster #541 at the 2021 North American Cystic Fibrosis Conference (NACFC). Virtual. November 1-5, 2021; Krystal Biotech. Data on file.
PFU, plaque forming unit

All products described in this presentation are investigational therapies

Krystal

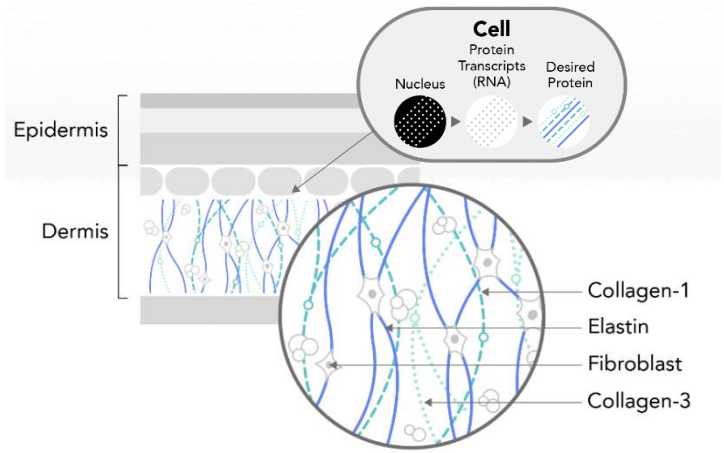
JEUNE

A wholly owned subsidiary of Krystal Biotech, Inc.

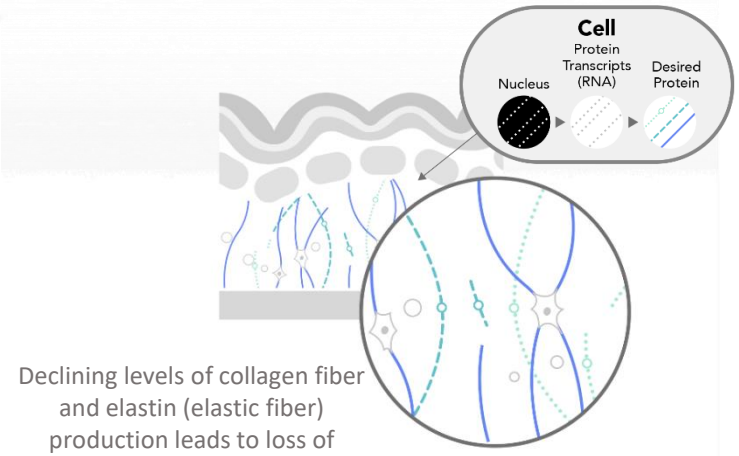
The Characteristic Look of Aging is Caused by Declining Levels of Key Proteins in the Skin's Extracellular Matrix

- Skin aging is a complex process that is caused by intrinsic factors (age) and extrinsic factors (e.g., sun, cigarette smoke, pollutants, diet etc.)
- These factors cause dermal matrix alterations, impaired collagen synthesis, and degradation of extracellular matrix which consequently affects overall quality and function of skin
- The primary function of the extracellular matrix is to give skin its mechanical and biochemical properties

YOUNGER / HEALTHY



AGED / PHOTODAMAGED



Declining levels of collagen fiber and elastin (elastic fiber) production leads to loss of extracellular matrix integrity

Jeune Aesthetics is Creating a New Category of Aesthetic Medicines Designed to Directly Address Underlying Biology

Damage

Using light and sound waves, **energy-based devices damage the skin** triggering a wound healing response

Fill

Whether bovine collagen, hyaluronic acid, or others, **fillers add artificial volume** to decrease the appearance of wrinkles

Paralyze

By inducing temporary denervation **toxins paralyze the underlying muscle** to prevent movement, thereby decreasing the appearance of wrinkles

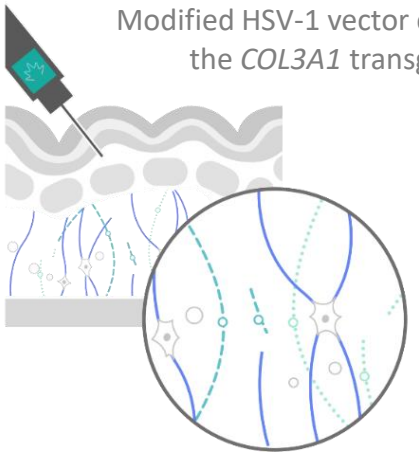
Restore and Rebuild

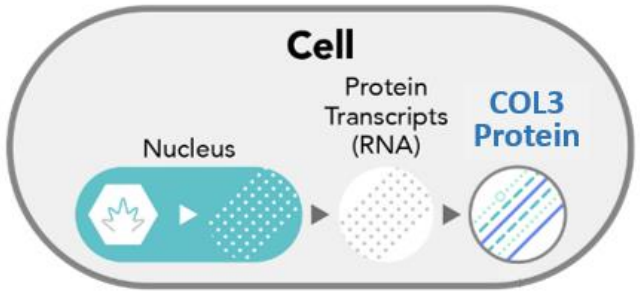
Via targeted gene delivery directly to skin cells Jeune Aesthetics' gene-based treatments are designed to **restore protein production to rebuild** the underlying extracellular matrix structure, to improve skin quality and appearance

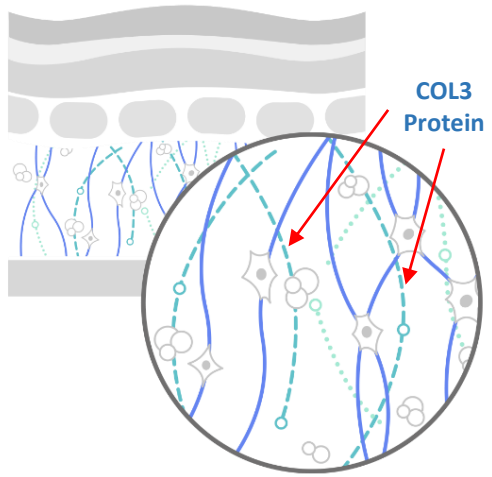
KB301 Mode of Action

KB301

Modified HSV-1 vector containing the *COL3A1* transgene







1 Intradermal Injection

- Delivered via 33G needle
- Treatment area numbed with ice (no topical anesthesia required)

2 Protein Synthesis

- Once in the nucleus, *COL3A1* gene designed to allow normal cell machinery to make COL3 protein*

3 Protein Integration

- Newly made protein is secreted into the extracellular space where it rebuilds and restores the extracellular matrix

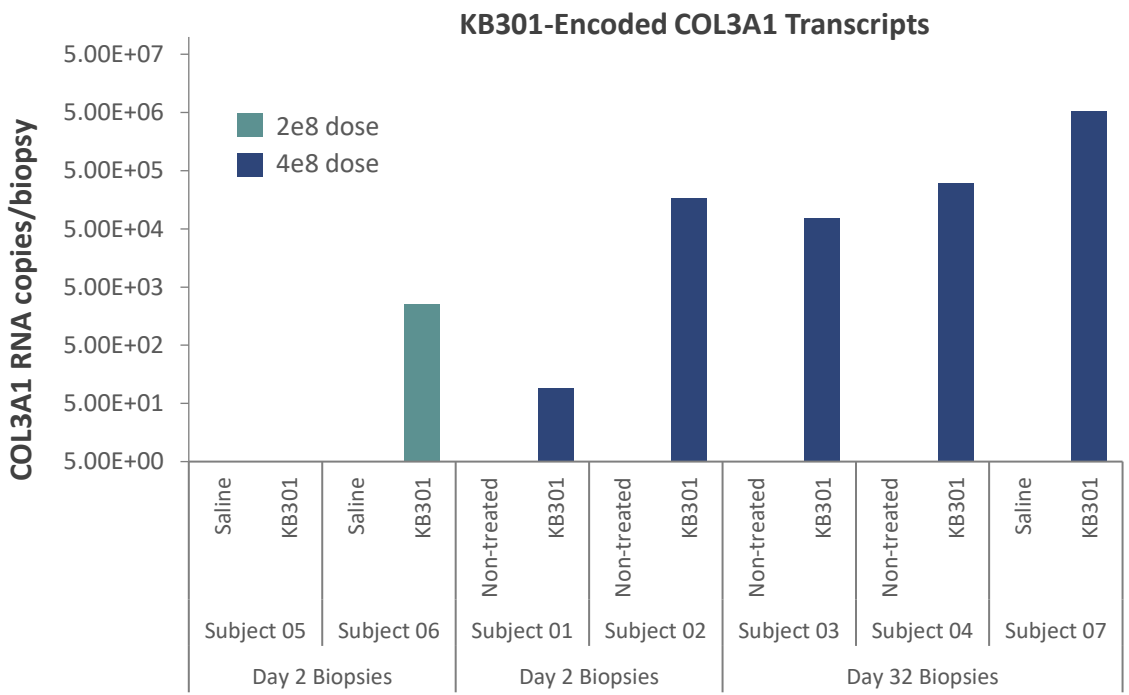
*COL3 provides tensile strength, and influences other functions such as cell adhesion, migration, proliferation, and differentiation through its interaction with integrins, which are cell surface receptors[1]

1. Kim JK, et al. *J Biol Chem.* 2005;280(37):32512–20.

All products described in this presentation are investigational therapies

KB301 – Phase 1 Study, Cohort 1

COL3A1 transcripts were similar following first & second doses



Study Design

- Open label, dose ranging study designed to evaluate safety and repeat dosing after intradermal injections in 7 subjects aged ≥18 and ≤75
- Subjects received two (day 0 and day 30) intradermal bolus injections dosages (1e8, 2e8 and 4e8) in buttocks region; biopsy was taken on day 2 and day 32

Initial data from Cohort 1

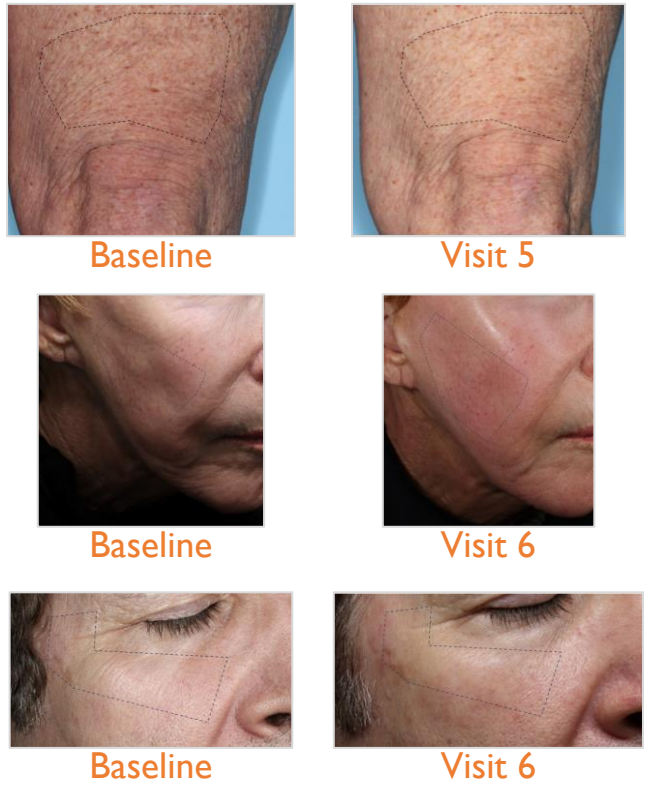
- Repeated intradermal injections of KB301 were well tolerated; adverse events were transient, mild to moderate injection site or biopsy site reactions (e.g., erythema, site pain, purpura, ecchymosis)
- No clinically significant changes in anti-drug antibodies were observed with up to 90-days of follow-up
- KB301-encoded *COL3A1* expression measurable at the mid and high dose; expression was evident by day 2 following the first dose

Krishnan S et al., Society for Investigative Dermatology Annual Meeting 2021

All products described in this presentation are investigational therapies

KB301 – Phase 1 Study, Cohort 2

Illustrative phots before vs after treatment



Cohort 2 Summary

- Repeat administration of KB301 was well tolerated across subjects with minimal injection site reactions; all injection site reactions resolved within 3-5 days post injection
  - Systemic adverse events (drug or placebo related) included: mild body ache (n=4), mild fatigue (n=4), mild headache (n=2), mild chills (n=2); moderate muscle pain on one side of the body (placebo, n=1)
- Treatment of KB301 has demonstrated improved Subject Satisfaction Scores across three areas compared with placebo
- Before/after pictures show improvement in fine lines and skin texture
- Fine Lines and Skin Texture Scale need further KB301 specific validation

Guide S. American Academy of Dermatology Annual Meeting 2022

All products described in this presentation are investigational therapies

Robust Pipeline Addressing Key Skin Proteins Holds Broad Potential

Jeune Aesthetics Pipeline

Aesthetics

Product	Gene	Indication	Discovery	Preclinical	Phase 1	Phase 2	Phase 3	Commercial
KB301	Type III collagen	TBD	→	→	→			
KB302	Type I collagen	TBD	→	→				
KB303	Elastin	TBD	→	→				
KB304	Type III collagen & Elastin	TBD	→					
KB305	Type IV collagen	TBD	→					

All pipeline compounds are investigational, being evaluated in clinical or pre-clinical studies. All pipeline compounds are wholly owned.

Fully Integrated

Significantly Expanding In-house Manufacturing Capacity and Expertise

Existing ANCORIS Facility

- ~10,000 sq. ft. GMP facility
- Built to support global B-VEC launch

New ASTRA Facility

- ~150,000 sq. ft. GMP facility
- Operational in 2H 2022

2022 Milestones

Timing	Program	Event
√	KB301 for aesthetic indications	Announced positive proof-of-concept efficacy data in Phase 1 clinical trial
√	B-VEC for DEB	Published GEM-1/2 Phase 1 and Phase 2 clinical trial data in *Nature Medicine*
√	B-VEC for DEB	Presented detailed GEM-3 results at AAD and SID
√	B-VEC for DEB	BLA accepted and under review with FDA
√	KB407 for cystic fibrosis	IND accepted by FDA
2H22	KB407 for cystic fibrosis	Initiate Phase 1 clinical trial in Australia
2H22	B-VEC for DEB	File MAA with EMA
2H22	KB407 for cystic fibrosis	Initiate clinical trial in US
1H23	KB105 for TGM1-ARCI	Initiate dosing in next Phase 1/2 cohort
1H23	KB104 for Netherton syndrome	File IND and initiate clinical trial
1H23	KB301 for aesthetic indications	Initiate Phase 2 in aesthetic skin indications

Krystal

Developing Genetic Medicines for Rare Diseases