## A GENE-BASED AESTHETICS COMPANY

March 2022

# JEUNE

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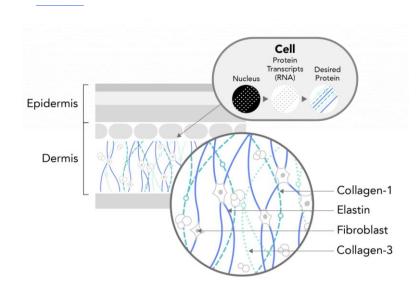
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## Introduction

## 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







Cell

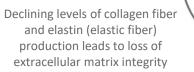
Protein

Transcripts

(RNA)

Desired

Protein



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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



#### Whether bovine collagen, hyaluronic acid, or others, **fillers add artificial**

Fill

**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 is designed to increase production of type III collagen

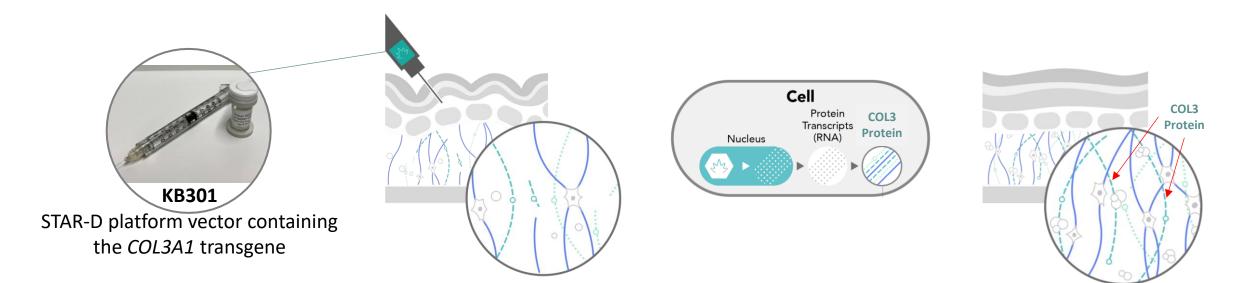
## Presence of COL3 fibrils induces deposition of long-lasting COL1 fibrils

- COL3 appears early during collagen fibrillogenesis, and the subsequent replacement of this COL3 by COL1 is a critical step for collagen fibril maturation and extracellular matrix reorganization<sup>1</sup>
- In addition, COL3 both regulates the dimensions of COL1 fibers<sup>2</sup> and enhances COL1 elasticity<sup>3</sup>
- As such, the appearance of early COL3 expression, and ensuing replacement with COL1, has been used as a marker of efficacy for injectable facial fillers in humans<sup>4</sup>
- 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<sup>5</sup>

		. – – – – ,	
	Type I Collagen	Type III Collagen	Elastin
Percentage in the skin	70-80%	20-30%	2-3%
Aging alteration	Increases with growth, decreases with age	Abundant in baby skin, decreases with growth	Abundant in baby skin, peaks in mid-20s / early 30s and declines thereafter
		0.01101	

- 1. Wang, P. et al., 2018. Wound healing. Journal of the Chinese Medical Association, 81(2), pp. 94-101.
- 2. Liu, X. et al., 1997. Type III collagen is crucial for collagen I fibrillogenesis and for normal cardiovascular development.. Proc Natl Acad Sci U S A, 94(5), pp. 1853-6.
- 3. Asgari, M., Latifi, N., Heris, H.K. et al. In vitro fibrillogenesis of tropocollagen type III in collagen type I affects its relative fibrillar topology and mechanics. Sci Rep 7, 1392 (2017).
- 4. Yutskovskaya, Y., Kogan, E. & Leshunov, E., 2014. A randomized, split-face, histomorphologic study comparing a volumetric calcium hydroxylapatite and a hyaluronic acid-based dermal filler. J Drugs Dermatol, 13(9), pp. 1047-52.
- 5. Kim JK, Xu Y, Xu X, Keene DR, Gurusiddappa S, Liang X, Wary KK and Hook M, 2005. A novel binding site in collagen type III for integrins alpha l beta l and alpha2beta l. J Biol Chem 280, 32512–20.

### KB301 – Mode of Action



(3)

#### Ready to Use

 Shipped on dry ice and stored at below freezing at sites



#### **Intradermal Injection**

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

#### **Protein Synthesis**

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



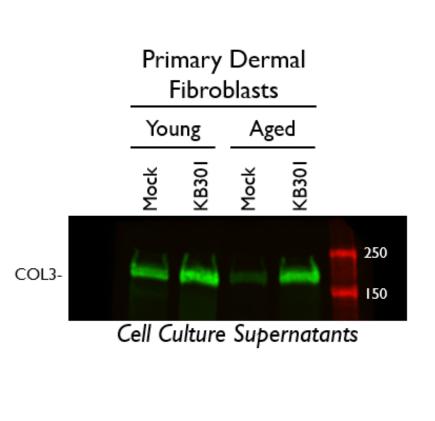
#### **Protein Integration**

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

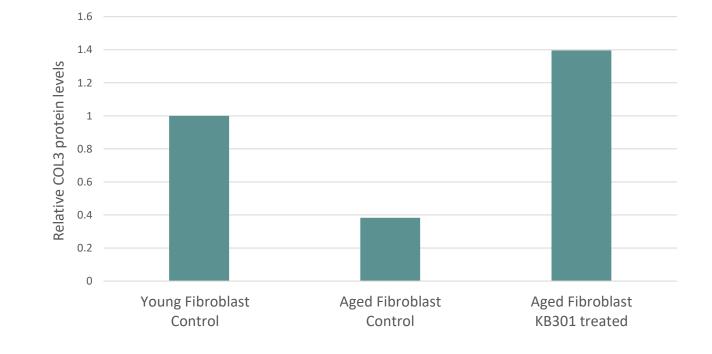


## KB301

In Vitro Studies Show Aged-Human Fibroblasts can produce comparable amount of COL3 to young human Fibroblast after treating with KB301



Quantitative analysis of Western Blot data demonstrates treatment with KB301 restores levels of COL3 secretion to the younger phenotype



COL3 levels from Young Fibroblasts used as Reference Value = 1

Source: Data on File

## PEARL-I Cohort I – Data Presented at SID 2021

Well tolerated with minimal adverse events

#### Design

• Open label, dose ranging study designed to evaluate safety and repeat dosing after intradermal injections in 7 subjects

#### Dosing

- 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

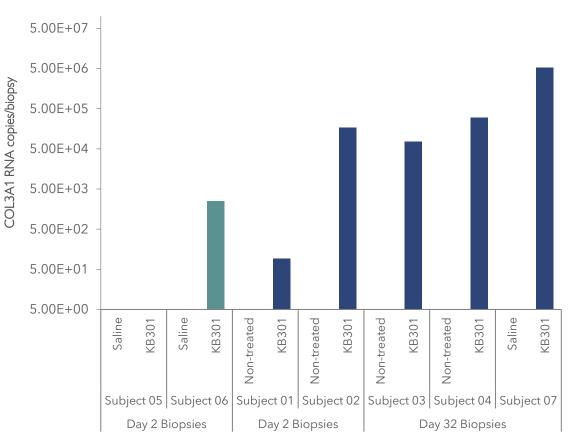
#### Safety & Tolerability

- Well tolerated with no systemic adverse events
- Injection site erythema and pain (grade 1 and 2) and adverse events related to punch biopsy were observed
- No vector shedding detected in blood, urine or skin swabs
- No meaningful change in lab results

#### **Efficacy Measures**

- *COL3A1* transgene expression 2-days post-dose, as measured by qRT-PCR of skin biopsies
- Expression was observed with 2e8 and 4e8 dose as well as after second (30 days repeat) dosing

#### RNA copy levels were similar following first and second intradermal doses



#### KB301-Encoded COL3A1 Transcripts

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## PEARL-I Cohort 2 Safety & POC Efficacy Study Design

#### Hypothesis

KB301 will improve extracellular matrix of the aged/photo damaged skin thereby improving skin quality attributes such as fine lines, skin texture and thickness of the skin



#### **Study Design**

- Split face/knee design with treatment side randomized 2:1 for active arm
- Subjects administered KB301 high dose / low dose / placebo
- Intent to Treat = 27 subjects or 54 sites (36 active, 18 placebo) were recruited across 2 sites



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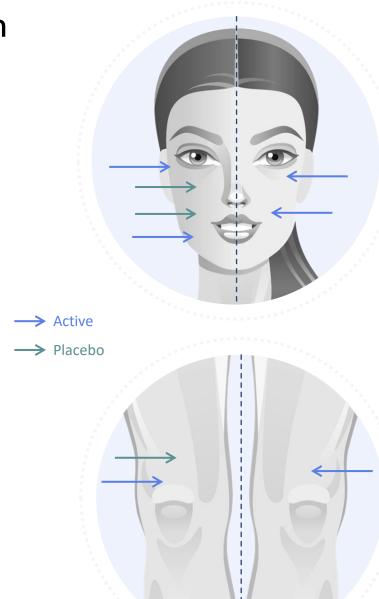
#### Safety and Tolerability

• Besides general physical examination, vector shedding in blood, urine or skin swabs and routine lab were performed to rule out any systemic side effects

#### **Efficacy Measures**

- Jeune Aesthetics Skin Roughness Score (JASRS)<sup>1</sup>
- Jeune Aesthetics Fine Lines Score (JAFLS)<sup>2</sup>

- Subject Satisfaction Score (SSS)
- Skin thickness over the knee



1. Adapted from Donofrio L, Carruthers A, Hardas B, et al. Development and validation of a photonumeric scale for evaluation of facial skin texture. Dermatol Surg. 2016;42(suppl 1):S219-S226.

2. Adapted from Carruthers J, Donofrio L, Hardas B et al. Development and validation of a photonumeric scale for evaluation of facial fine lines. Dermatol Surg. 2016;42:S227–S234. 101

### Baseline Characteristics and Disposition

#### 27 Subjects Enrolled in the Study; 23 fully completed

Criteria	Baseline in PEARL-I Study	Comments
Healthy Male and Female Subjects	Male: I Female: 26	
Between 30 and 70 years old at time of written consent	Average age: 65.1 years	Older age-range than us typical in aesthetic trials due to regulatory feedback
Subjects with Fitzpatrick skin type I through III	Type II: 93% subjects Type III: 7% subjects	The Fitzpatrick skin type describes a way to classify the skin, from I (most severe) through V by its reaction to exposure to sunlight.
Scored moderate, severe and extreme in fines line scale and moderate, severe and diffuse in skin texture scale	JAFLS <sup>1</sup> : 23% Severe and 77% Extreme JASRS <sup>2</sup> : 23% Severe and 77% Diffuse	Study enrolled mostly severe, extreme or diffuse Subjects based on regulatory feedback
Enrolled Subjects were first dosed behind the ear for safety prior to injections in the face and knee	27 Subjects were randomized to receive either KB301 or Placebo. 23 Subjects fully completed the Study	No AE related dropouts in the Study

1. Adapted from Carruthers J, Donofrio L, Hardas B et al. Development and validation of a photonumeric scale for evaluation of facial fine lines. Dermatol Surg. 2016;42:S227–S234. 101

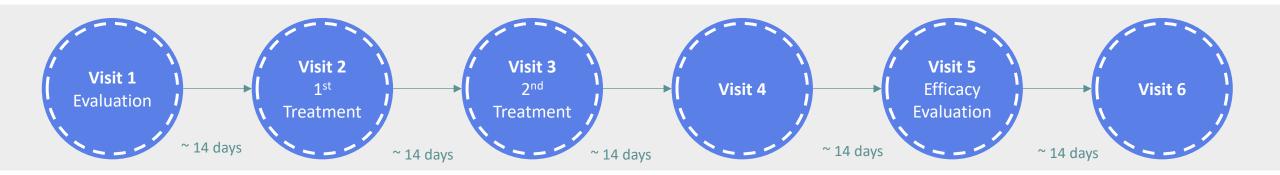
2. Adapted from Donofrio L, Carruthers A, Hardas B, et al. Development and validation of a photonumeric scale for evaluation of facial skin texture. Dermatol Surg. 2016;42(suppl 1):S219–S226.



## Knee

### Above the Knee: Treatment Schedule and Outcome Measurements

Treatment: 1ml of low dose of KB301 or placebo injected with 33G needle in area above knee



		Outcome Measurements	Description	Comments
(	Skin above the knee	Safety	Safety and tolerability	Evaluated at all visits
		Salety	Injection site reactions (ISRs)	Evaluated after each injection
			Subject Satisfaction Scores	Assessed by subjects on each side separately
		Efficacy	Skin fold assessment with calipers	Assessed at baseline and Visit 5
			Global assessment in Improvement	Assessed by blinded site investigator

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### Above the Knee: Injection Site Reactions

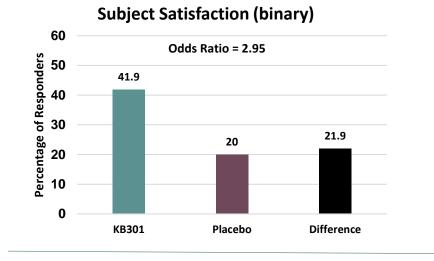
Injection Site Reactions							
	Above Knee AE Counts						
	KB301 PLACEBO						
	Visit 2	Visit 3	Visit 2	Visit 3			
Blisters	1	0	0	0			
Bruising	1	1	0	0			
Bumps	1	0	0	0			
Unspecified	1	0					
Itching	3	0	0	0			
Pain	2	1	0	0			
Pruritus	2	1	0	0			
Rash	2	0	0	0			
Redness	8	0	0	0			
Soreness	1 0 0 0						
Swelling	15 6 1 0						
Tenderness	5 1 0 0						
Warmness	3 1 0						
N	45	11	2	0			

- 100% of the active adverse events were mild
- Injection site reactions minimized following the first injection

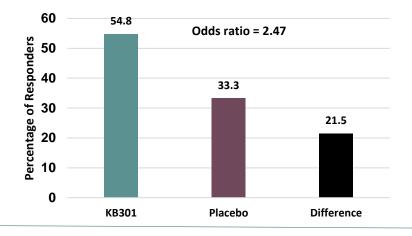
## Above the Knee: Efficacy Assessments

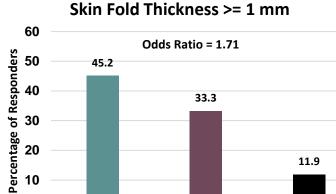
Meaningful Improvement in Subject Satisfaction, Investigator Assessment and Improvement in Thickness between Active and Placebo

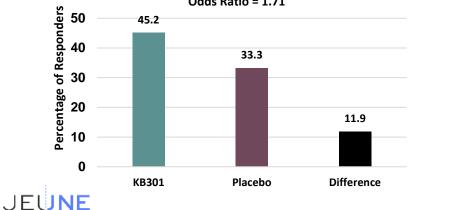
N for KB103 = 31 | N for Placebo = 15

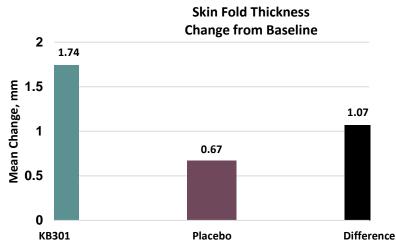


#### Investigator Assessment (binary)

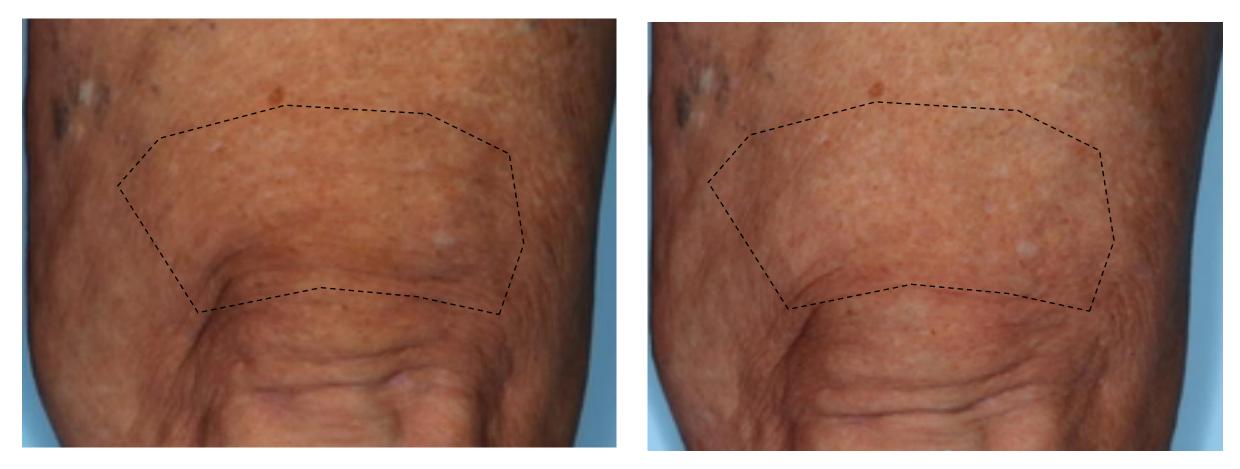








Above the Knee: Before and After of Left Knee Treated with KB301 Low Dose



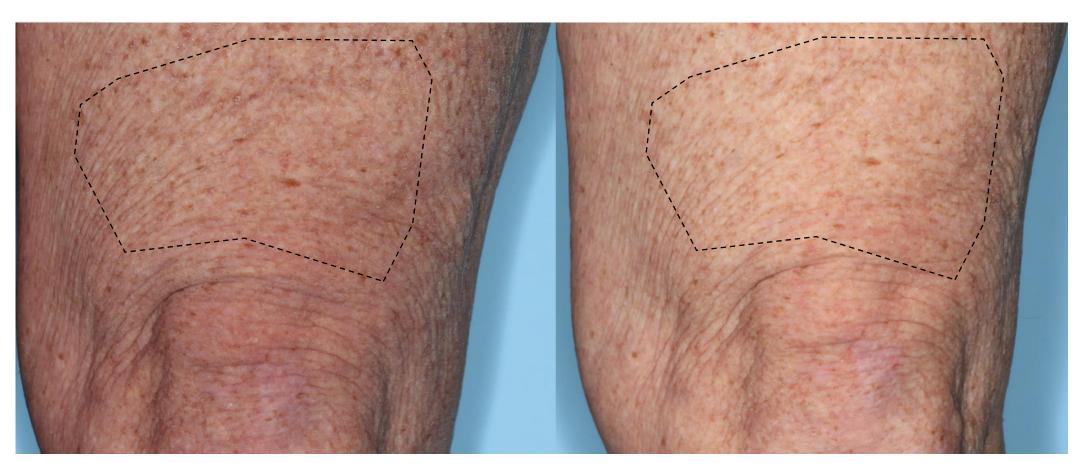
**Baseline** 

Visit 5

Improvement in texture as well as fine lines and softening of the folds



#### Above the Knee: Before and After of Left knee treated with KB301 Low Dose



#### **Baseline**

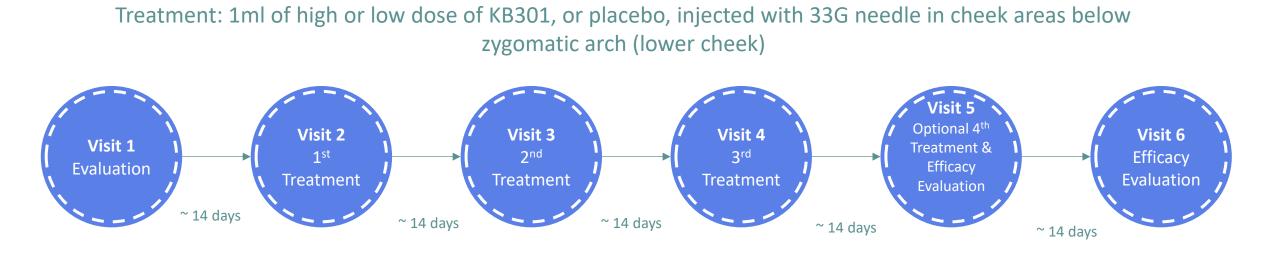
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Visit 5

Improvement in texture as well as fine lines and softening of the folds

## Lower Cheek

## Lower Cheek: Treatment Schedule and Outcome Measurements



	Outcome Measurements	Description	Comments			
	Safety	Safety and tolerability	Evaluated at all visits			
Below	,	Injection site reactions (ISRs)	Evaluated after each injection			
zygomatic arch		Subject Satisfaction Scores	Assessed by subjects on each side separately			
E	Efficacy	Skin Texture Score and Fine Lines Score	Assessed by Blinded Independent Reviewer using photographs and evaluated based on scales that were developed <u>specific to this skin</u> <u>area but not specific to KB301</u>			

### Lower Cheek: Injection Site Reactions

	I	njecti	on Site	Reacti	ons per	Visit		
		В	elow Zygo	matic Arch	AE Counts			
		K	B301			PLAC	CEBO	
	Visit 2	Visit 3	Visit 4	Visit 5	Visit 2	Visit 3	Visit 4	Visit 5
Blisters	I	0	0	0	0	0	0	0
Bruising <sup>1</sup>	I	I	0	0	l	0	0	0
Bumps	2	0	0	2	0	0	0	0
Erythema	2	0	0	0	0	0	0	0
Unspecified	I	0	0	0	l	0	0	0
Irritated	0	0	l	0	0	0	0	0
ltching	I	0	0	l	0	0	0	0
Redness	5	I	2	2	0	0	0	I
Soreness	0	0	l	0	0	0	0	0
Swelling <sup>2</sup>	10	8	5	4	l	0	0	0
Tenderness	8	5	0	l	0	0	0	I
Warmness	l	2	0	0	0	0	0	0
N	32	17	9	10	3	0	0	2

- 91% of the active adverse events (N = 68) were mild; 9% were moderate
- Injection site reactions minimized following the first injection

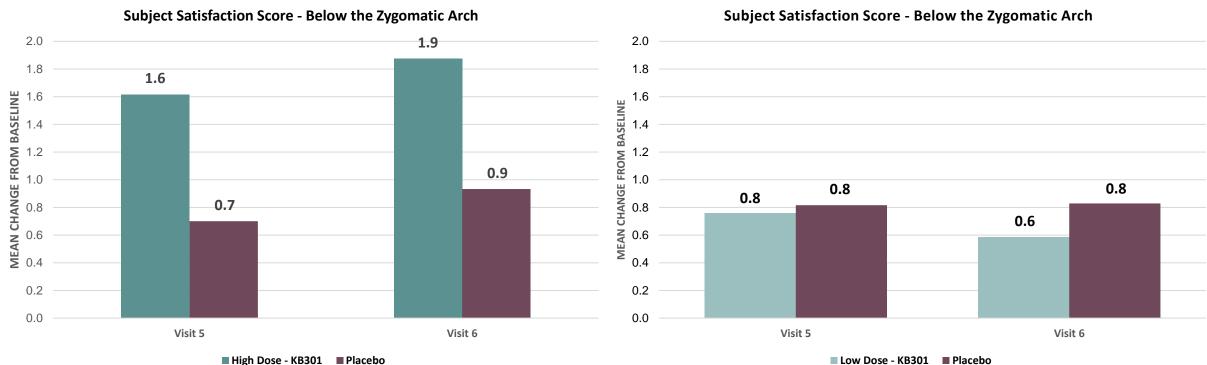


- 1. All were mild except 1 were moderate
- 2. All were mild except 3 were moderate

3. All were mild except 2 were moderate

Lower Cheek: Efficacy Measures - Subject Satisfaction Efficacy Assessment

#### Difference in Mean Change from Baseline between High Dose KB301 and Placebo is Clinically Meaningful



N for High Dose = 19 for KB301 | N = 9 for Matching Placebo\*

High Dose

Low Dose

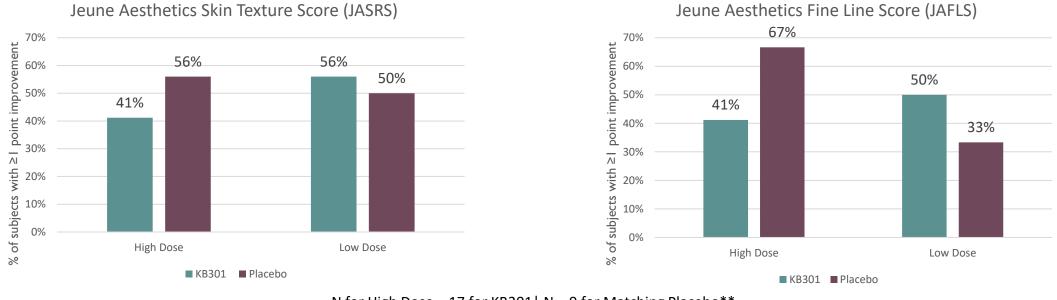
N for Low Dose = 12 for KB301 | N = 6 for Matching Placebo

\*Assessment was done on 23 subjects.

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## Lower Cheek: Efficacy Measures – JASRS and JAFLS Scale Assessment

Evaluation by Blinded Independent Reviewer Showed No Separation between Active and Placebo Low or High Dose\* with respect to exploratory JASRS and JAFLS measures



N for High Dose = 17 for KB301 | N = 9 for Matching Placebo\*\* N for Low Dose = 12 for KB301 | N = 6 for Matching Placebo

**Observations by blinded evaluator:** Moderate improvement in skin laxity; Improvement in solar dyschromia (redness); Improvement in telangiectasia (microvasculature)

#### Lower Cheek: Before and After Right Side Treated with KB301 High Dose

Overall improvement in texture, fine lines and elasticity







Lower Cheek: Before and After Same subject Observation on Week 6 KB301 vs. Placebo



#### JEUNE High Dose KB301 – Visit 6

### Lower Cheek: Before and After Right side treated with KB301 High Dose

Subject Reported: "Right Cheek Significantly improved from last visit. One wrinkle completely resolved"



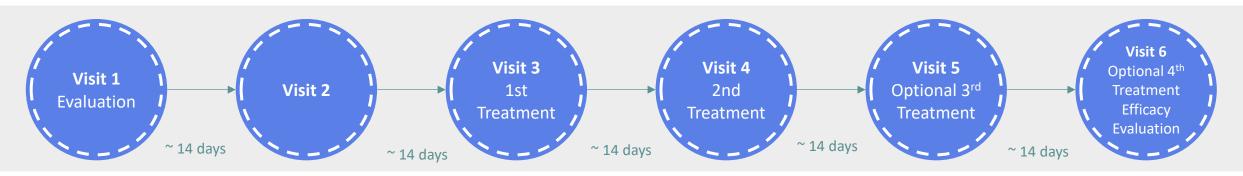


Baseline

## **Upper Cheek**

## **Upper Cheek: Treatment Schedule and Outcome Measurements**

Treatment: 0.5 mL of low dose of KB301 or placebo injected with 33 G needle in cheeks above the zygomatic arch (upper cheek)



	Outcome Measurements	Description	Comments
Above zygomatic	Safety	Safety and tolerability	Evaluated at all visits
arch		Injection site reactions (ISRs)	Evaluated after each injection
		Subject Satisfaction Scores	Assessed by subjects on each side separately
Efficacy	Efficacy	Blinded Independent Evaluator Assessment	No existing scale for this skin area. Clinically meaningful improvement assessed by blinded evaluator using Pictures

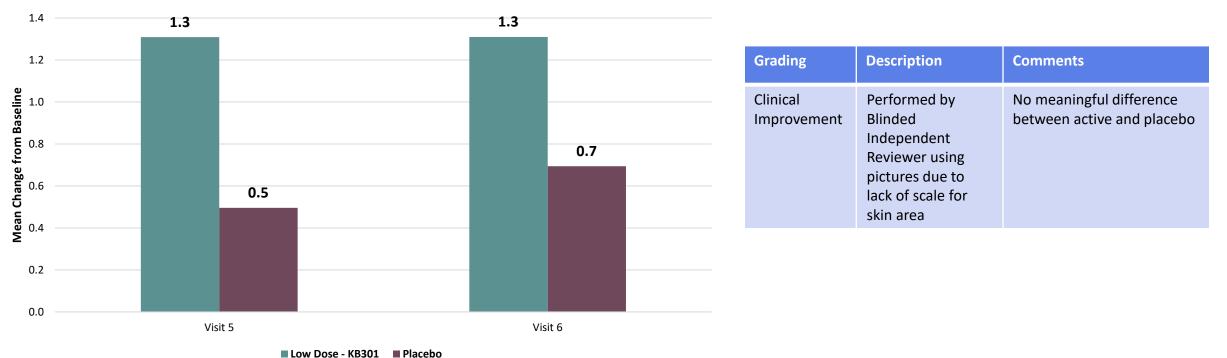
## Upper Cheek: Injection Site Reactions

Injection Site Reactions per Visit									
P		A	bove Zygor	matic Arch	AE Counts				
		KI	B301			PLACEBO			
	Visit 3	Visit 4	Visit 5	Visit 6	Visit 3	Visit 4	Visit 5	Visit 6	
Bruising	3	2	0	0	0	0	0	1	
Bumps	0	0	2	0	0	0	0	0	
Erythema	2	0	0	0	0	0	0	0	
Irritated	0	1	1	0	0	0	0	0	
ltching	0	0	1	0	0	0	0	0	
Redness	3	2	1	0	0	0	0	0	
Soreness	1	1	0	0	0	0	0	0	
Swelling <sup>1</sup>	4	5	8	1	0	1	0	2	
Tenderness	4	0	1	4	0	0	0	0	
Warmness	2	0	0	0	0	0	0	0	
N	19	11	14	5	0	1	0	3	

- 98% of the active adverse events (N = 49) were mild; 2% were moderate
- Injection site reactions minimized following the first injection

## **Upper Cheek: Efficacy Measures**

Difference in Mean Change from Baseline between Low Dose KB301 and Placebo is Clinically Meaningful



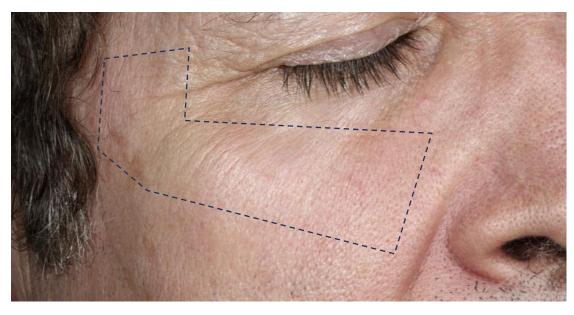
Subject Satisfaction Score - Above the Zygomatic arch

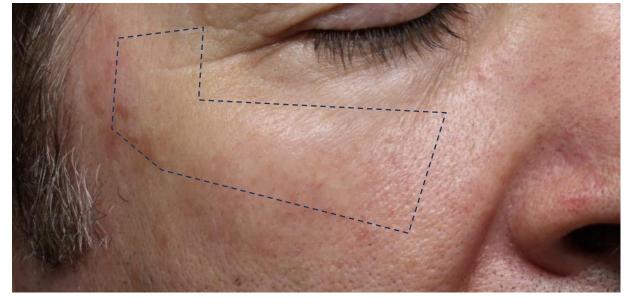
N for KB301= 31 for KB301  $\mid$  N = 15 for Placebo

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## Upper Cheek: Before and After with low dose of KB301

Improvement in fine lines as well as reduction on lateral canthal line because of increased elasticity of the skin





Baseline

Visit 6



## Upper Cheek: Before and After Pictures with low dose of KB301

Improvement in fine lines as well as reduction on lateral canthal line because of increased elasticity of the skin



#### Baseline



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## Upper Cheek: Same Subject KB301 vs Placebo on Visit 6

Improvement in fine lines as well as reduction on lateral canthal line because of increased elasticity of the skin



KB301 low dose – Visit 6

Placebo - Visit 6



## Phase I 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 side, n=1)



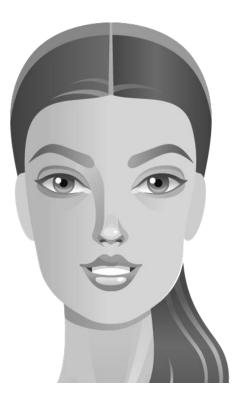
Treatment of KB301 has demonstrated clinical benefit vs placebo, including improved Subject Satisfaction Scores across three areas compared with placebo

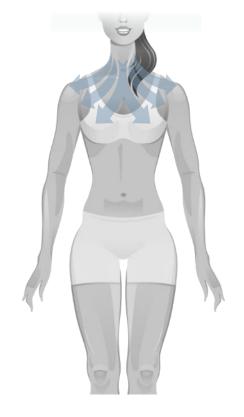
- Above the Knee: KB301 injection in the area above the knee was associated with improved thickness as well as improved Subject Satisfaction and Investigator Assessment compared with placebo, indicating potential opportunity beyond face (e.g., back of the hand)
- Lower cheek: while exploratory Skin Texture Scale and Fine Line Scale did not demonstrate separation of treated vs placebo, KB301 treatment resulted in improved skin laxity, solar dyschromia and telangiectasia as well as improved Subject Satisfaction Scores in the high dose cohort
- Upper cheek: KB301 treatment was associated with improved elasticity, reduced fine lines as well as improved Subject Satisfaction Scores in the high dose cohort



## Market Opportunity

KB301 Has Potential to Provide Differentiated Benefit in Large and Growing Markets





**Global Facial Injectables Market<sup>1</sup>** 



Source: ISAPS International Survey on Aesthetic / Cosmetic Procedures Note: Not all products or indications approved in the US.

I. August 2021 – Grand View Research - Facial Injectable Market Size & Share Report, 2021-2028.

2. November 2020 – Research and Markets - Global Skincare Devices Market (2020 to 2030) - by Product, Distribution Channel, Application and End-user.

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#### **Global Skincare Devices Market<sup>2</sup>**

 $\$18B \rightarrow \$50B$ 

## Closing and Q&A

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March 2022

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