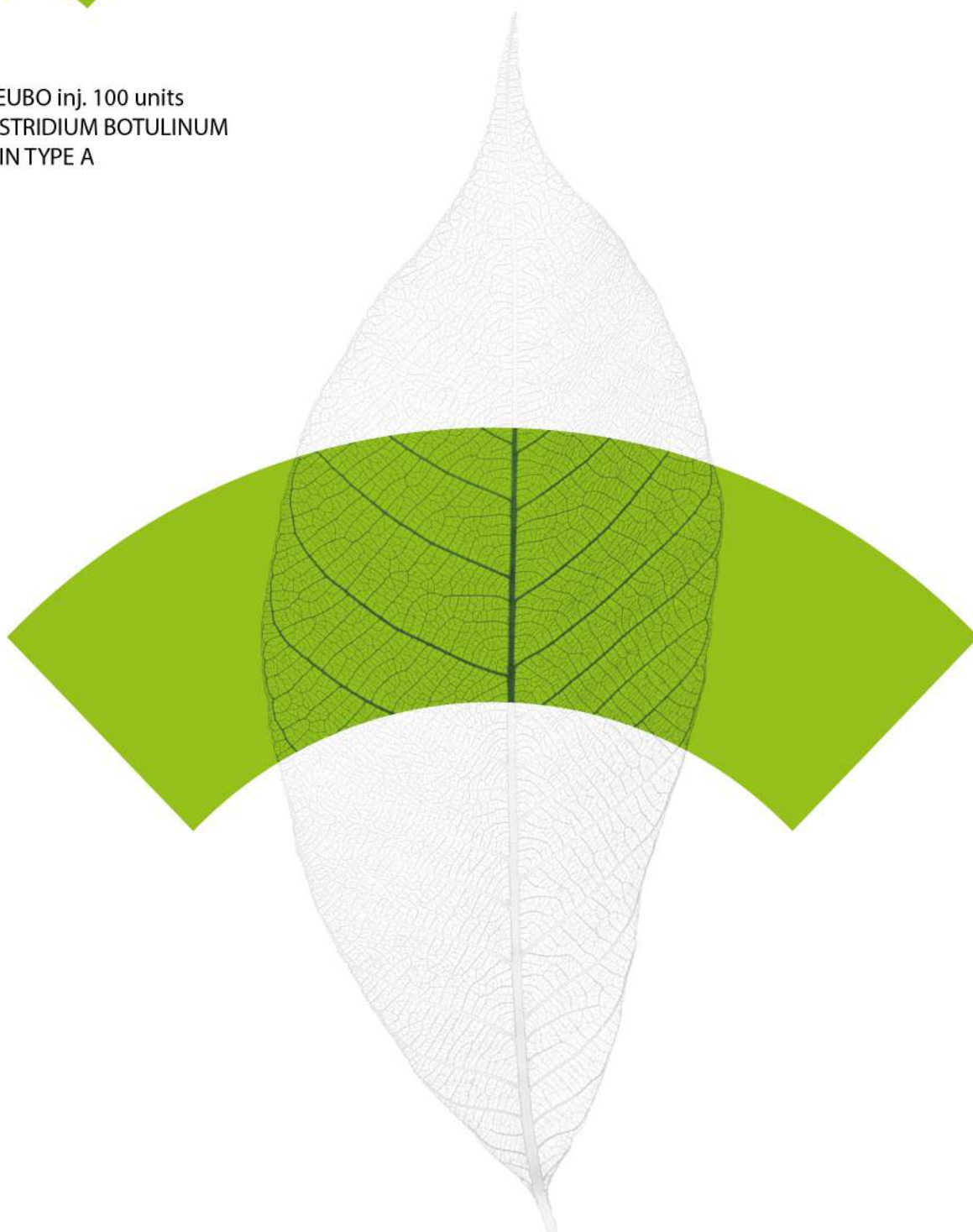


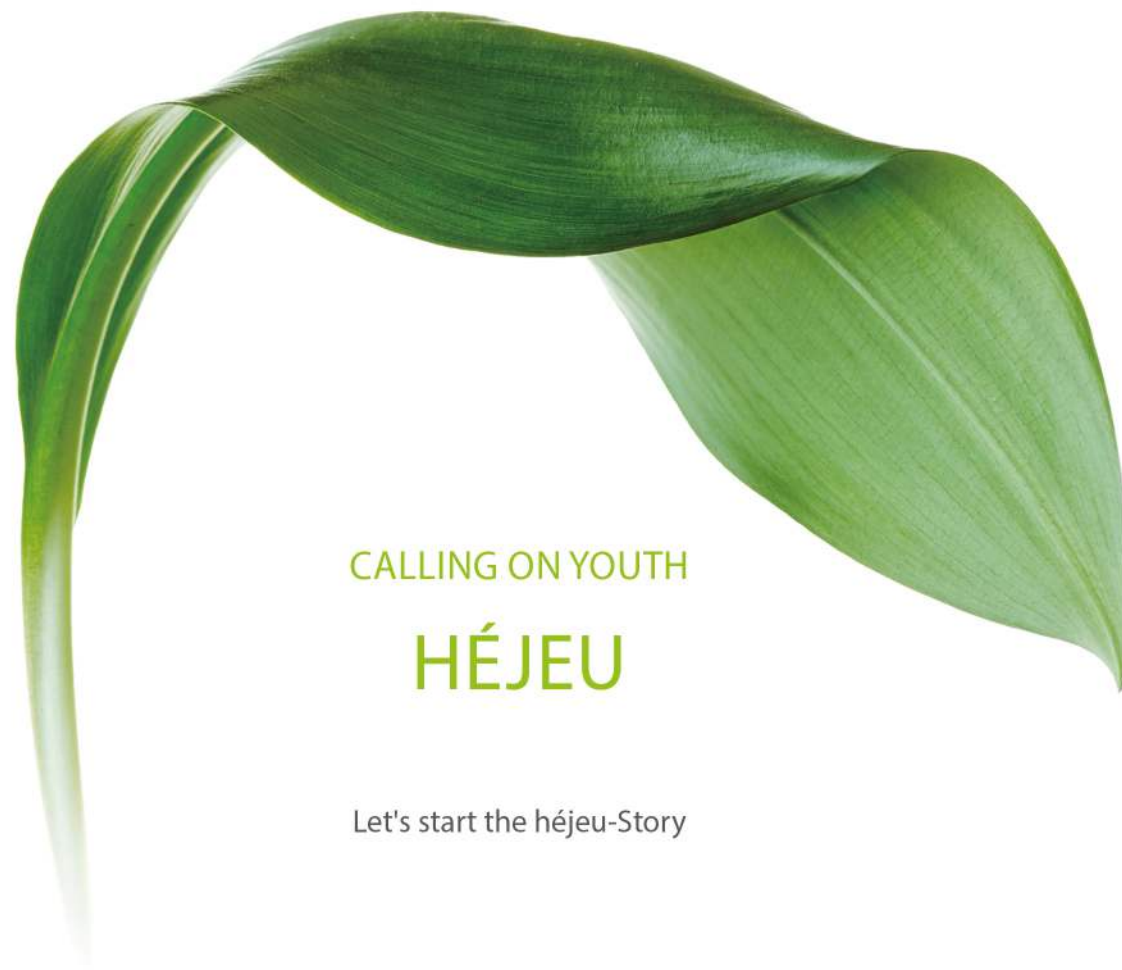
# héjeubo

inj.



HÉJEUBO inj. 100 units  
CLOSTRIDIUM BOTULINUM  
TOXIN TYPE A





CALLING ON YOUTH

## HÉJEU

Let's start the héjeu-Story



What is the message of the héjeu-story?

Enhances the inherent beauty of every single person.  
For more natural treatment, intensity control is needed.  
It's the operator-friendly and patient-satisfied 'Calling on youth', HÉJEU.



What is the identity of the héjeu-symbol?

### Bio-arc

Bio-arc embodies the image of  
a doctor healing the affected area at once.



What is the theme of the héjeu-color?

The human eye can identify more green shades than any other color.  
So the green spectrum that we can see is also the widest.  
Green is the most 'natural' shade and symbol of 'regeneration'.  
A fresh color of life and regeneration, "hejeu-green" expresses "young-green" in color.







HÉJEUBO® IS A VERIFIED BOTULINUM TOXIN

# héjeubo<sub>inj.</sub>



hé | Hé  
HEY

jeu | Jeune  
YOUNG

bo | BOTULINUM  
TOXIN

## HÉJEUBO

It's a compound word based on French that has a good nuance and connotation. It contains the meaning of "find your youth through HÉJEUBO®".

# héjeubo<sub>inj.</sub>



HÉJEUBO inj. 100 units  
CLOSTRIDIUM BOTULINUM  
TOXIN TYPE A



CALLING ON YOUTH

BALANCE

REGENERATION

REVIVE

RECHARGING

VITALITY

REJUVENATION



HÉJEUBO® IS A VERIFIED BOTULINUM TOXIN

Verified One

01

STRICT POTENCY  
MANAGEMENT

Strict internal potency standards

Verified Two

02

APPLICATION OF  
VERIFIED DRYING  
METHOD

Application of the "botulinum toxin-specific  
vacuum drying" method suitable for  
the infinitesimal amount of protein

Verified Three

03

VERIFIED  
EFFICACY AND SAFETY

Application of drug (new drug) development  
process based on global standards

Verified Four

04

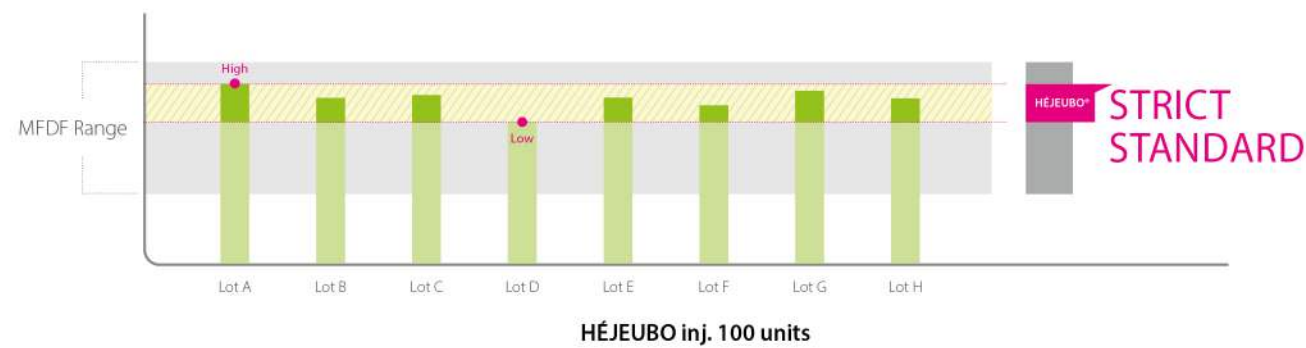
UTILIZATION VERIFIED  
FACILITIES/EQUIPMENT

Global Pharmaceutical  
GMP-based Production System

## STRICT POTENCY STANDARDS OF HÉJEUBO®

HÉJEUBO® manages potency under strict standards.

### POTENCY DEVIATION



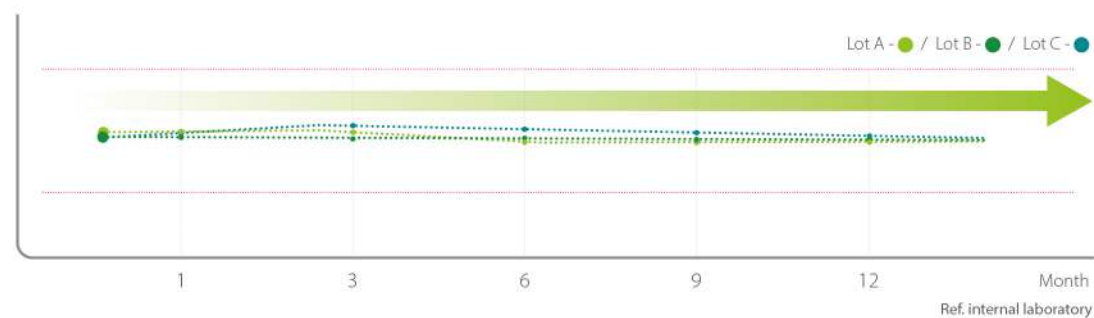
MFDS Range (Potency acceptable range)

HÉJEUBO® (Internal-standard)

HÉJEUBO® has a small potency deviation for each lot, so the treatment result can be predicted.

### POTENCY STABILITY TEST

Results of 1~12months potency stability test.



HÉJEUBO® is stable in potency over a long period of time.

## VERIFIED DRYING METHOD OF HÉJEUBO®

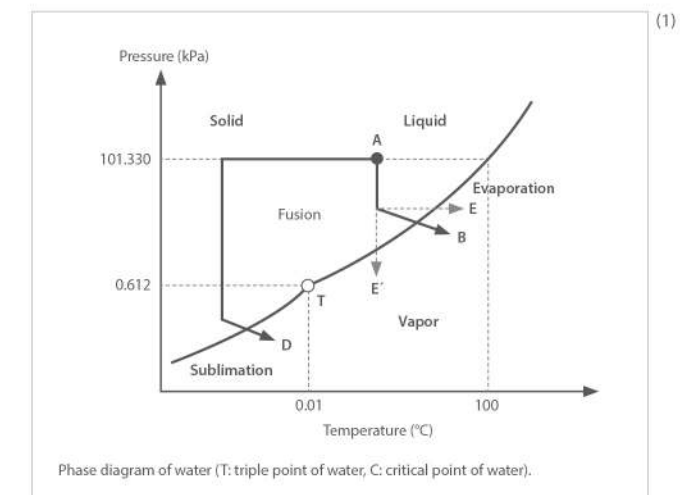
HÉJEUBO® applied "botulinum toxin-specific vacuum drying" method suitable for the infinitesimal amount of protein.

### Freeze Drying (A → D)

The Product should be first frozen by decreasing its temperature, then the water vapor pressure should be lowered below the pressure corresponding to the triple point, and finally some heat should be supplied to help the ice to convert into vapor by sublimation.

### Vacuum Drying (A → B)

If a product being at a pressure and temperature corresponding to ambient condition (marked the point A) is to be dried by vacuum drying, then it should follow the line from A to point B.



	Freeze Drying	HÉJEUBO® (Vacuum Drying)
Inactive Protein	↑	↓
Deformation of Raw Materials	↑	↓
Energy Consumption	High	Low
Efficiency of Production	Low	High
Drying Method	Drying after freezing	Evaporation
Drying Time	Long	Short
Cake Appearance	Non-uniform (cracked)	Uniform

Ref. (1) Drying Technologies In Food Processing, Wiley-Blackwell July 2008

(2) Korean J. Medicinal Crop Sci. 22(4) : 225 - 261 (2014)

Walters et al., JOURNAL OF PHARMACEUTICAL SCIENCES / jps.23998

Drug Discovery Today: Technologies Vol. 5, No. 2-3 2008

International Journal of Food Engineering Vol. 4, No. 2, June 2018






HÉJEUBO® is a product that has verified efficacy and safety through Preclinic Study of the global standard.

#### PRECLINICAL STUDY

Category	Study Type	Study Object	Study Contents
Toxicity	Single Dose Toxicity Study	Rat	A test in which a drug is administered to an animal under test once and the toxicity occurring within a certain period of time is quantitatively and qualitatively determined
		Monkey	
	Repeated Dose Toxicity Study	Rat	A test to investigate the toxicity of an animal being tested when it is subjected to a substance after a certain period of time
		Monkey	
	Embryo-Fetal Development Toxicity Study	Rat	A test to determine how the substance that you want to test causes mammals to reproduce and develop
Safety Pharmacology	Other toxicity tests	Rabbit	It can be performed as part of a single or repeated toxicity test, and detailed clinical and pathological evaluation of the injection site is conducted
		Rat/Monkey	
		CHO hERG cells	
	Cardiovascular System	Rat	A study on the possibility of undesirable pharmacological effects from administration in animals under test
Efficacy Comparison	Respiratory System	Mouse	
	Central Nervous System	Mouse	Comparing the effectiveness of a trial drug against a reference drug

#### TOXICITY TEST

TEST Type	Doses (U/kg)	TEST Type	Doses (U/kg)	TEST Type	Doses (U/kg)
 Injection into lateral gastrocnemius of Rat - Intramuscular	0	 Injection into lateral gastrocnemius of Monkey - Intramuscular	0	 Injection into lateral gastrocnemius of Rabbit - Intramuscular	-
	6		8		-
	30		16		-
	150		32		-
	0		0		-
	1.5		2		-
	3		4		-
	6		16		-
	0		-		0
	1		-		0.1
Embryo-Fetal Development	3	-	-		0.2
	9		-		0.4

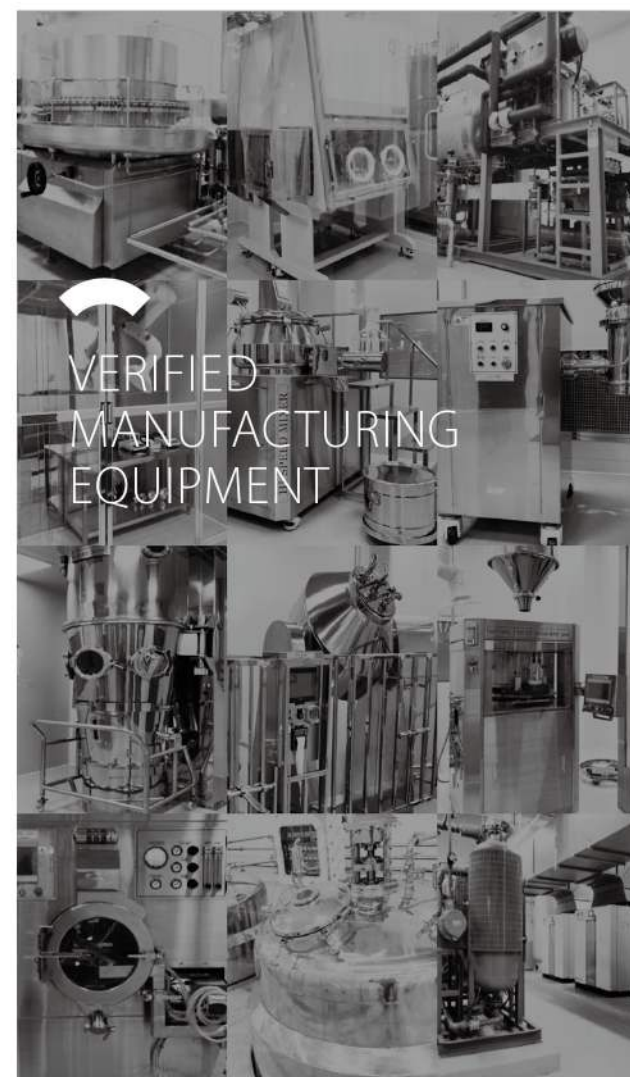
#### SAFETY PHARMACOLOGY TEST

TEST Type	Doses	
CHO hERG cells - in vitro	0	U/ml
	0.125	
	0.25	
	0.5	
	1	
Rat - Intramuscular	0	U/kg
	1.5	
	3	
	6	
	0	
Mouse - Intramuscular	1.5	
	3	
	6	

#### EFFICACY COMPARISON

TEST Type	Doses	Comparison
Mouse	0	Company A
	0.125	
	0.25	
	0.5	

HÉJEUBO® is produced through Global Pharmaceutical GMP-based Production System.



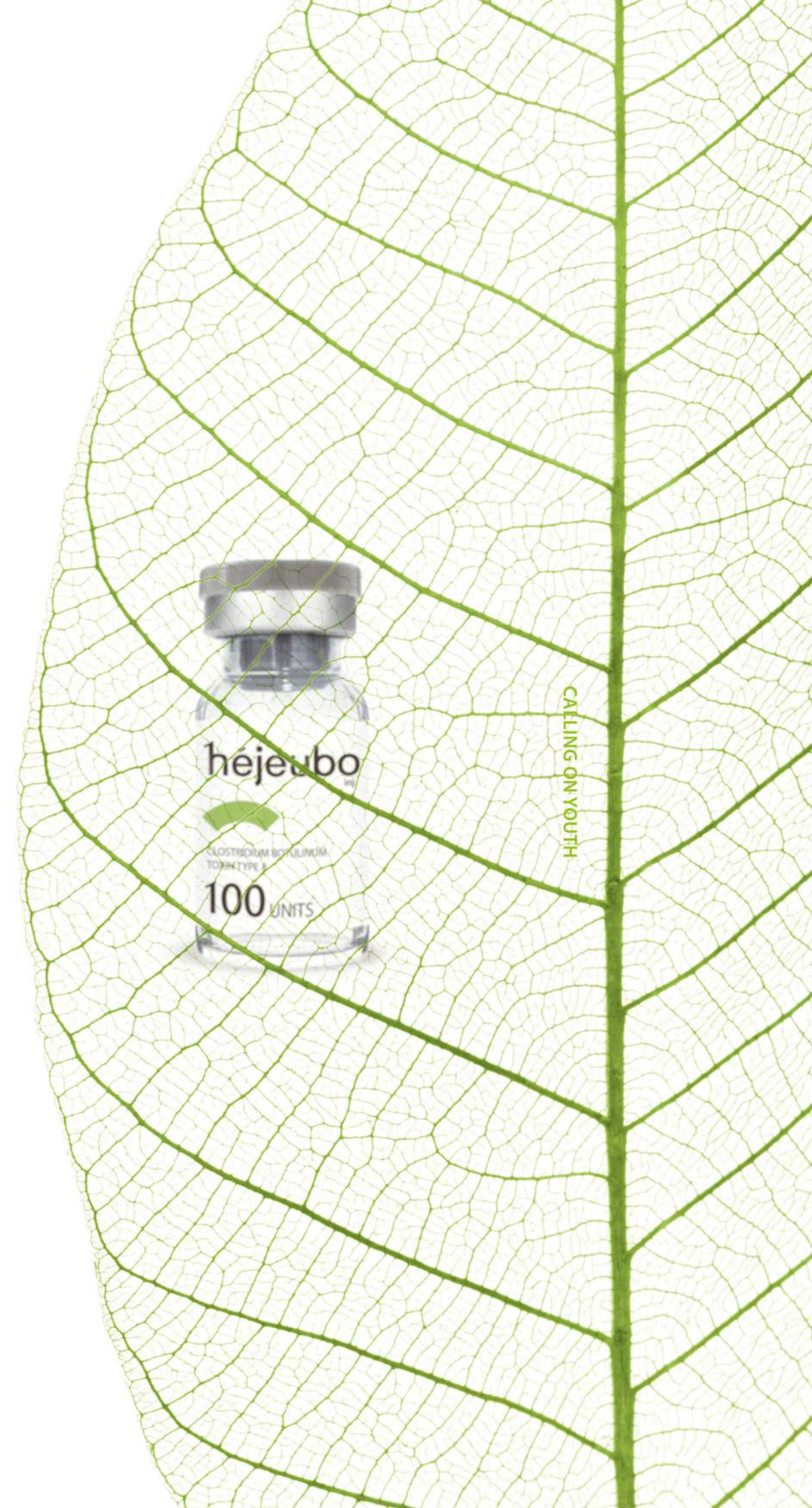


# héjeubo<sub>inj.</sub>



HÉJEUBO inj. 100 units  
CLOSTRIDIUM BOTULINUM  
TOXIN TYPE A

HÉJEUBO® IS A VERIFIED BOTULINUM TOXIN





## HÉJEUBO® SPECIFICATION

ACTIVE INGREDIENT	Clostridium botulinum toxin type A
CONTENTS (1 VIAL)	Clostridium botulinum toxin type A_100 units Human Serum Albumin_0.5 mg Sodium chloride_0.9 mg
APPEARANCE	A white or slightly yellow dried product in a clear colorless vial and clear transparent solution when dissolved in saline
EFFECT	Temporary improvement of moderate to severe wrinkle lines (such as glabellar lines) in adult patients
MECHANISM	A temporary reduction in muscle activity for medical and aesthetic use







héjeubo  
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