







### Chairman of the Board



#### 林羣 Andrew Lin, MBA

#### 董事長 Chairman

- Chairman of TaiRx, Inc.
- Chairman of Nuwa Healthcare
- Founding partner of Affinity Capital
- Independent Board of Directors for Fubon Insurance
- Former Chairman of Lotus Pharmaceutical
- Former Chief Executive Officer of Hasumi Biotechnology International
- Former Chief Strategy Office for Chicony Electronics/Clevo Group
- Former Managing Director with Macquarie Capital
- Former Chief Financial Officer for Lite-On Technology Group
- Former Chief Investment Officer for ABN AMRO Asset Management Taiwan
- Former General Manager for J.P. Morgan Securities Taiwan



#### **Board of Directors**



簡海珊 博士 Haishan Jang, PhD Vice Chairwoman

Founder of BRIM, Former Chairwoman and CEO of BRIM



曾惠瑾 會計師 Audrey Tseng, MBA

Former Deputy Chairman of PwC Taiwan



以賽亞資本
Isaiah Capital LLC
代表:李誠志
Rep: Bernard Lee

Angel investor since Series A



中加顧問 CIDC Consultants 代表:李懿欣 Rep: Yihsin Lee

Venture capital



安富大健康一號 Affinity Capital 代表:程淑芬 Rep: Sophia Cheng

Private equity



# Independent Board of Directors



李鍾熙 博士 Johnsee Lee, PhD, MBA

Former ITRI President Honorary Chairman of Taiwan BIO



郭宗銘 會計師 Howard Kuo, MBA

Former Deputy Chairman of PwC Taiwan



程守真 律師 James Cheng, JD

Partner of Tsar & Tsai Law Firm



### **C-Suite Team**



徐文祺 博士 WenChyi Shyu, PhD

總經理 Chief Executive Officer 超過30年經驗 30+ years experience

- Former VP and global head of DMPK at Takeda
- Former group director of Discovery Medicine and Clinical Pharmacology at BMS
- Lead approval of over 20 new drugs, including maribavir, dapagloflozin, brentuximab vedotin, and vedolizumab
- Over 100 IND submissions



郭美慧 Mei-Hui Kuo

營運長 Chief Operation Officer 超過30年經驗 30+ years experience

- Former COO of Senhwa Biosciences
- Former VP and COO of BRIM
- Former VP of operation at Development Center for Biotechnology
- Former Director of New Product Development at TTY Biopharm
- Former Senior VP and Board Member at CDIB Bioscience Venture Management



### C-Suite Team/ Founders



#### 簡海珊 博士 Haishan Jang, PhD

國際策略長 Chief Global Strategist 超過30年經驗 30+ years experience

- Former Chairman and CEO of BRIM
- Previously a member of Senior Management at Centocor
- Former Manager at DuPont and Sanofi
- Former President at TWI Biotechnology (Taiwan)
- Drug development of Uroxatral, Tirazon, Remicade, Simponi, and Stelara



Frank W. Lee, PhD

研發長 Chief Scientific Officer 超過41年經驗 41+ years experience

- Former Vice President of DMPK at Takeda
- Former member of Senior Management at Millennium Pharmaceuticals and DuPont Pharma
- Drug development of Naprosyn, Anaprox, Ticlid, Toradol, Avodart, Flonase, Imitrex, Zofran, Sustiva, Velcade, Entyvio® and Ixazomib



### **Project Team**







**Operation Team** 



Dr. Pan-Chyr Yang, (SAB), 35 yrs, NTU Dr. Robert Ruffolo, (SAB), 41 yrs, Pfizer Dr. Eliot Lazar, 27 yrs, MD

& KOLs

Pre-clinical & CROs

and CMOs Strategic Partnership

Dr. Wen Chyi Shyu, 30+ yrs, Takeda Dr. Haishan Jang, 30 yrs, Centocor Dr. Conrad Tou.







Dr. Chyau Liang, 32 yrs, Osha Liang

CMC & Pharmaceutical

33 yrs, AstraZeneca

Dr. Frank Lee, 41 yrs, Takeda

Dr. Carl Alden,

41 yrs, Takeda







Su Lin 20 yrs, Regeneron

Dr. Wayne Liaw, 34 yrs, Otonomy



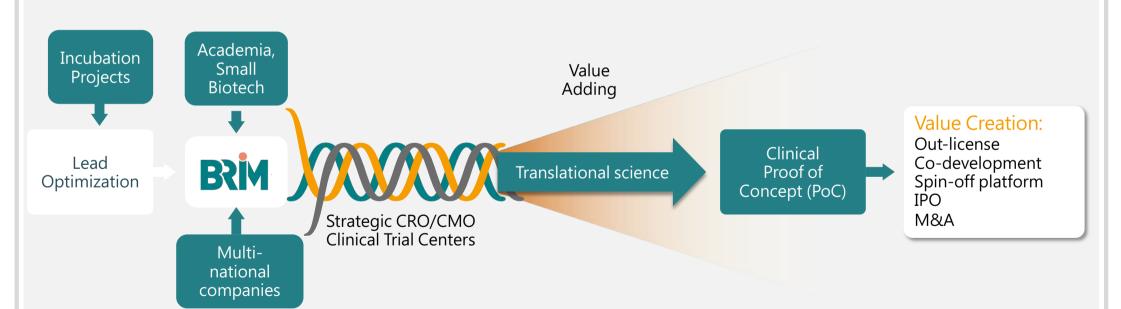




### Our Approach

Maximize ROI through early exit at clinical proof of concept (PoC)

Reduced IND enabling time (1.5-3 years from lead ID to IND submission) Good budget control of both R&D and fixed costs



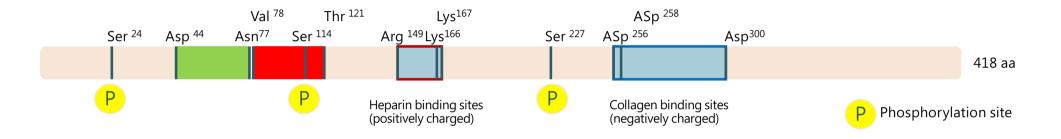
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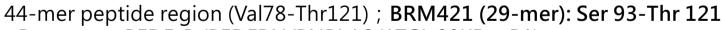


### Functional domains of PEDF





- Receptors: Laminin receptor (PEDF-RA;60KDa), LRP6, β-subunit ATP synthase
- Function: anti-angiogenesis, pro-apoptotic tumor cells (anti-tumor)



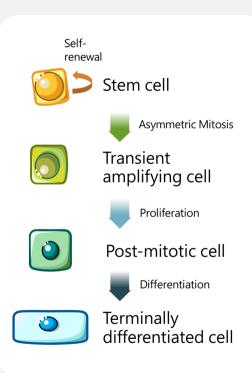
- Receptors: PEDF-R (PEDFRN/PNPLA2/ATGL;80KDa; P1)
- Function:

neurotrophy, neuroprotective activity, stem cell regeneration, anti-inflammation



### PEDF-derived Short Peptide (PDSP) Platform

Unique features well suited for the discovery and development of new therapeutics



Promotes the proliferation and differentiation of stem cells and then repairs damaged tissues

Early-onset potential in various disease animal models

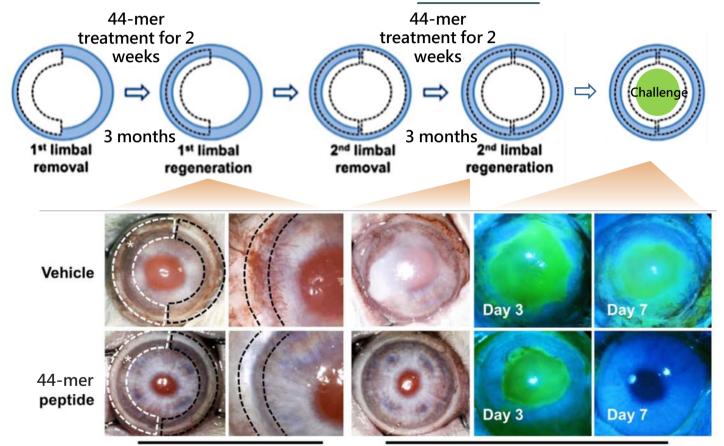
Low immunogenicity due to short peptides

No endotoxin risk with drug substance produced by solid-phase peptide synthesis (SPPS)

High pharmaceutical stability with formulation optimized



# PDSP can regenerate limbus after severe damage



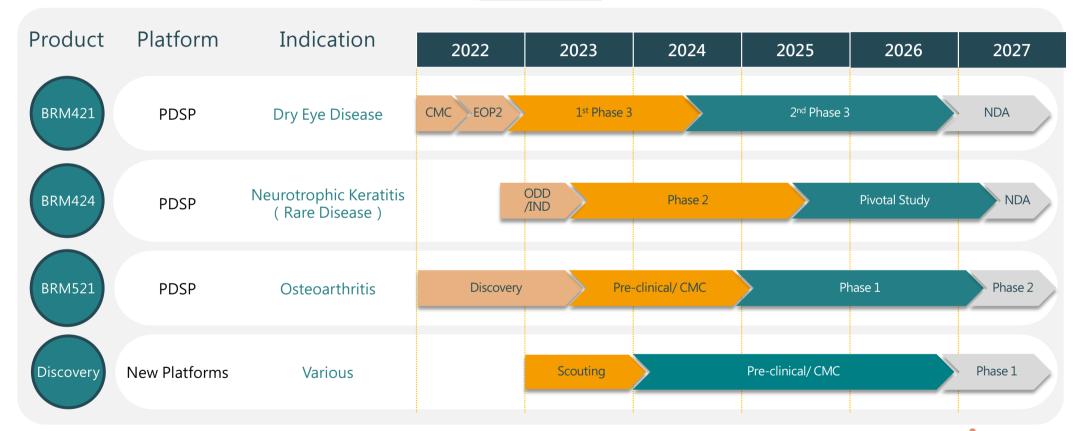
Invest Ophthalmol Vis Sci. 2016 May 1;57(6):2629-36.

1st limbal DISCLAIMER: This docum regeneration

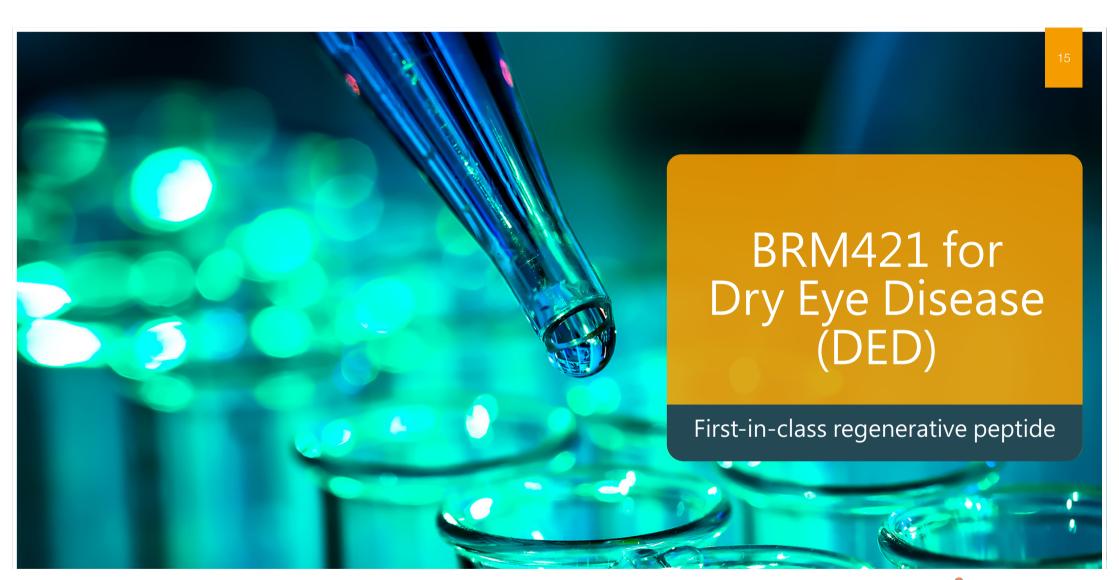
2<sup>nd</sup> limbal regeneration



### **Development Milestones**









Global DED population:

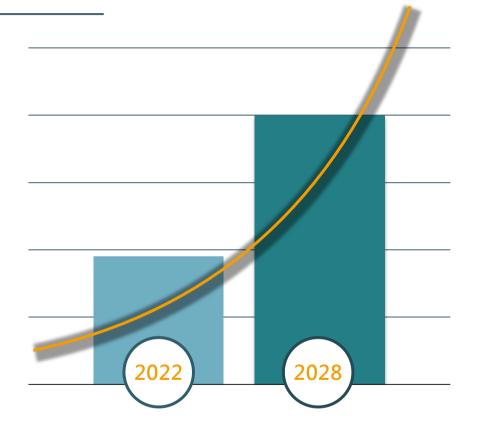
915 million

Severe DED:

~90 million



#### **DED Market**



2022 Global market size: 4.5 Billion USD<sup>1</sup> 2028 Global market size projection: ~6.3 Billion USD<sup>1</sup> CAGR (2022-2028)

#### References:

1. https://www.researchandmarkets.com/reports/5732359/dry-eye-syndrome-market-global-industry-trends



# DED competitors on market

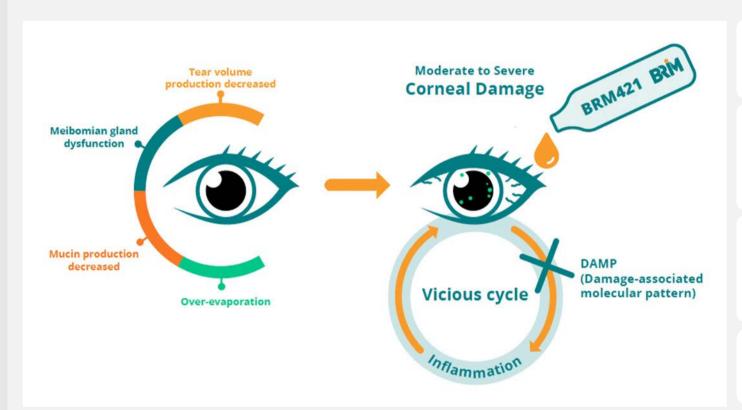
COMPANY/ DRUGS	DRUG TYPE	MOA / API	STATUS	ONSET (WEEKS)	FREQUENCY	SIDE EFFECT	PATENT	COMMENTARY
BRIM/ BRM421	peptide	stem cell regeneration/ PEDF-derived peptide	US Phase 3	2	3x daily	instillation site reaction (37%)	2043	visual improvement
Novartis/ Xiidra	small molecule	anti-inflammation / LFA antagonist	US approved EU withdrawn	12	2x daily	irritation (18%), dysgeusia (13%)	2033	\$7,600/yr
Allergan (AbbVie)/ Restasis	peptide	anti-inflammation / ciclosporin	US approved CN trial	24	2x daily	burning, stinging (17%)	2024	\$7,600/yr
Kala/ Eysuvis	small molecule	anti-inflammation / nano particle steroid	US approved	2	4x daily	conjunctivitis	2033	steroid may have risks for IOP
Oyster Point/ Tyrvaya	small molecule	tear production/ nicotinic acetylcholine receptor agonist	US approved	4	2x daily	sneezing (82%), cough (16%), throat irritation (13%)	2035	nasal spray; poor patient adherence
B&L/ Miebo	small molecule	artificial tear/ semifluorinated alkane	US approved	8	4x daily		2038	for mild DED patients
Essex / bFGF	protein	cornea repair / FGF	CN approved	2	6x daily	cannot use over two weeks	N/A	increases cancer risk
UNI-BIO / rhEGF	protein	cornea repair / EGF	CN approved	2	4x daily	cannot use over two weeks	N/A	increases cancer risk
Santen/ Diquas	small molecule	tear quality / P2Y2 receptor agonist	JPN approved CN approved US P3	4	6x daily	hypersensitivity, itching, irritation, conjunctivitis	2023	NA
Otsuka/ Mucosta	small molecule	tear quality / prostaglandin agonist	JPN approved US failed	4	4x daily	dysgeusia (9.7%)	2026	NA

# DED competitors in development

COMPANY/ DRUGS	DRUG TYPE	MOA / API	STATUS	ONSET (WEEKS)	FREQUENCY	SIDE EFFECT	PATENT	COMMENTARY
BRIM/ BRM421	29mer peptide	stem cell regeneration/ PEDF-derived peptide	US Phase 3	1-2	3x daily	instillation pain (37%)	2043	visual Improvement
Aldeyra/ reproxalap	small molecule	anti-inflammation/ RASP inhibitor	US NDA Nov, 2023	0-12	4x daily	instillation pain (>90%)	2037	patient withdrawal due to AEs
Allysta/ ALY688	10mer peptide	anti-inflammation + cell regeneration/ adiponectin analogue	US Phase 2b/3	8 (2)	2x daily		2037	expect results in Q2, 2023
HanAll/ tanfanercept	protein fragment	anti-inflammation/ TNFa inhibitor	US/CN Phase 3	8	2x daily	conjunctivitis and redness (6%)	2033	2 more P3 ongoing; AE pt withdrawal
Allergan/ tavilermide	cyclic tripeptide	growth factor/ NGF mimetics	US Phase 3	4	2x daily		2028	(MIM-D3) discontinued
RegeneRx/ RGN-259	43mer peptide	cell migration/ thymosin β4	US Phase 3	2-4	4 x daily	instillation pain (6%)	2035	pre-BLA on 2/28 NK P3
Stuart/ ST-100	peptide	restore structure/ collagen mimetic	US Phase 2	2-4	2x daily		2037	CMP is an old tech
Kala/ KPI-012	protein mixture	stem cell regeneration/ MSC secretome	US Phase 2b	1-4	2x daily		2040	for PCED trial



### Proposed MoAs of PDSP for DED treatment



### Activate limbal stem cells

#### Improve tear quality

Maintain goblet cell number Restore meibomian glands

#### Improve visual functions

Promote neurotrophic tissue protection

#### Break vicious cycle

Inhibit inflammation



### BRIM has licensed BRM421 CN rights to China Grand Pharm

# China Grand Pharm (CGP), HK: 0512

large healthcare group in China with vast ophthalmology distribution channels



Over
USD 85M
total deal size

China
Hong Kong
Macau
regional rights



# BRIM established strategic alliance with ORA

# ORA, Inc Ophthalmology CRO

execute over 70% of DED trials in the US



ORA owns stacks in BRM421 P3 trial as a strategic partner

Share sales royalty

Assist BRM421 global out-licensing



# BRM421's price is competitive

Product/ Company <sup>1</sup>	Package	Daily	Treatmen t Cycle	Retail Price <sup>2</sup>	Price/ cycle	2022 Sales
Xiidra/ Novartis (lifitegrast 5%)	60 ampules/ Box	2 times	3 months	US\$671.83/ Box/ month	US\$2015.49	487m
Restasis/ AbbVie (cyclosporein 0.05%)	60 ampules/ Box	2 times	6 months	US\$633.96 (US\$156.70 generic) / Box/ month	US\$3803.76 (US\$940.20)	1.29b
Cequa/ Sun Pharma (cyclosporein 0.09%)	60 ampules/ Box	2 times	3 months	US\$551.69/ Box/ month	US\$1655.07	est. 100m
Eysuvis/ KALA (corticosteroids 0.25%)	1 bottle	4 times	2 weeks	US\$493.08/ bottle/ 14 days	US\$493.08	9.4m (2021)
Tyrvaya/ Oyster Point (0.03mg/ spray)	2 bottle/ carton	2 times	1 month	US\$623.86/ carton/ month	US\$623.86	1.2m, 2021 Q4 13m, 2022 Q1-3
BRM421/ BRIM	42 ampules/ Box	3 times	2 weeks	<us\$150.00 <br="" box="">14 days³</us\$150.00>	<us\$150.00< td=""><td>N.A.</td></us\$150.00<>	N.A.

#### Notes:

- 1. All products listed are US products.
- 2. Prices for marketed products are retrieved from goodrx.com on 2023-04-24.
- 3. Assuming the best estimate of the gross profit margin of <u>over 90%</u> from COGS



# BRM421 efficacy in mouse DED model

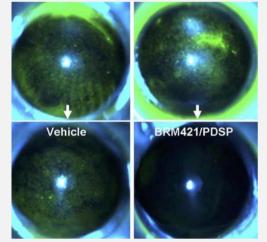
#### Topical BRM421 treatment in mouse DED model

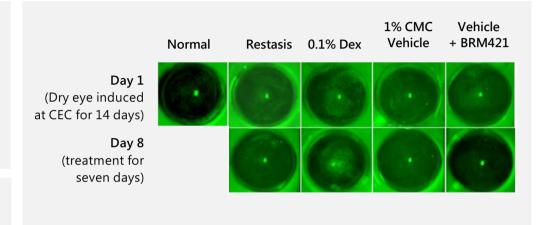
Mice housed at CEC for 14 days without topical treatment

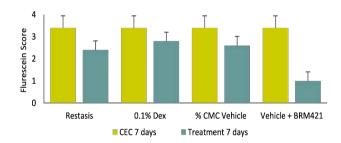
Drug dosing 3x a day for seven days in a normal environment

Pre-treatment

Post-treatment (topical 7 day)





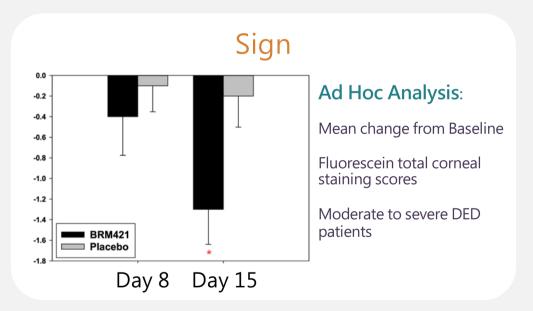


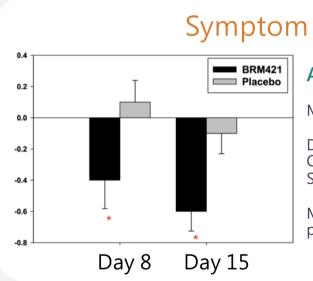
Dex: Dexamethasone

CMC: Carboxymethyl cellulose



# First-in-Human study showed a positive trend





#### Ad Hoc Analysis:

Mean change from Baseline

Dryness from Ora Calibra® Ocular Discomfort & 4-Symptom

Moderate to severe DED patients

\* p < 0.05

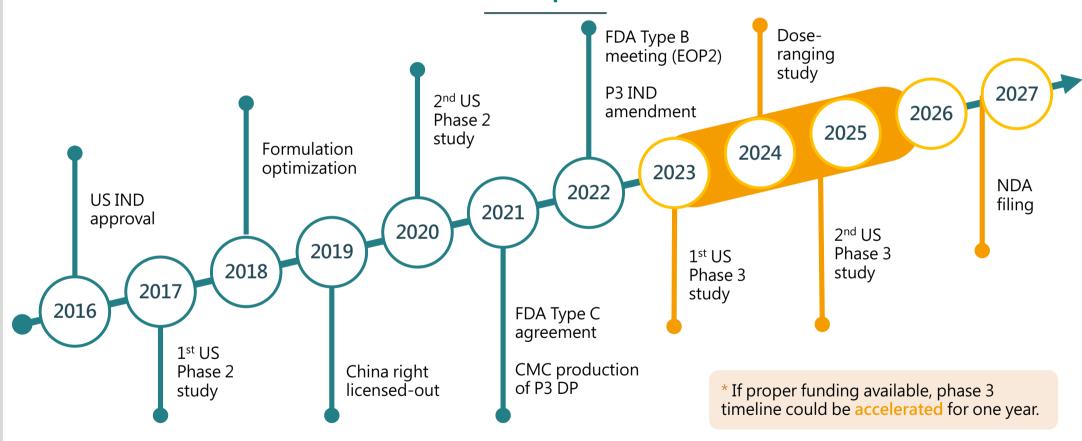


# BRM421 is in Phase 3 study

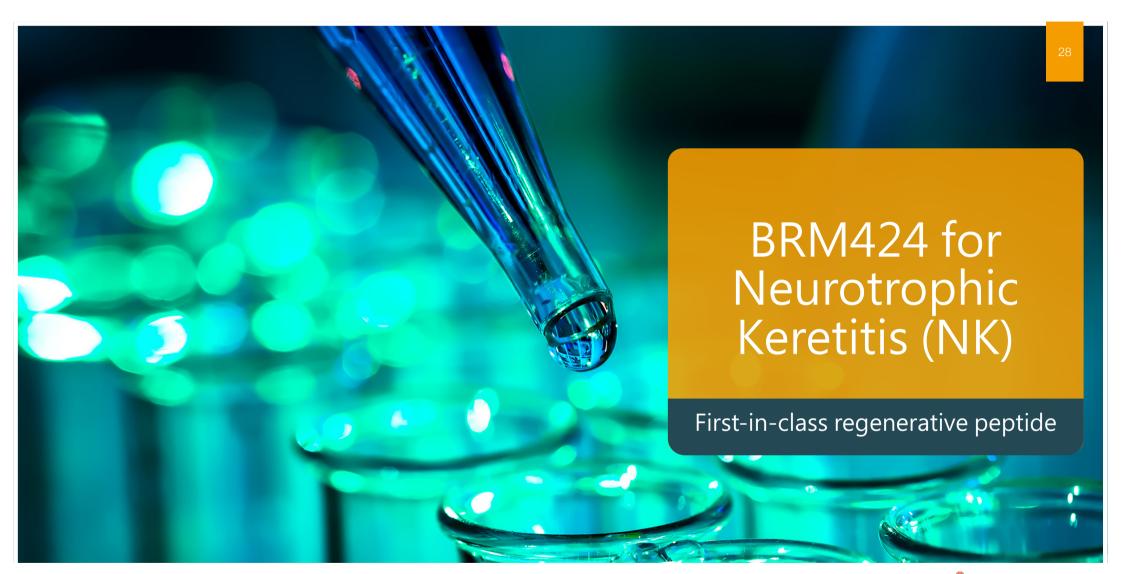
	Phase 2/3	Phase 3	
Enrollment Criteria	Moderate-to-severe	Moderate-to-severe	* same design
Duration	14 days	14 days	* same design
Endpoint: Sign	Fluorescein total corneal staining at Visit 4 (Day 15)	Fluorescein total corneal staining at Visit 4 (Day 15)	* same design
Endpoint: Symptom	Ocular Discomfort & 4-Symptom Dryness at Visit 4 (Day 15)	Visual Analogue Scale (VAS) Burning and Stinging at Visit 3 (Day 8)	* based on SIH data; FDA agreed (EOP2)
Formulation Stabilizer	High concentration	Low concentration	* no additional tox needed; FDA agreed (Type C)
Enrollment Number	220	~700	* calculated from SIH patient variability



### BRM421 development timeline

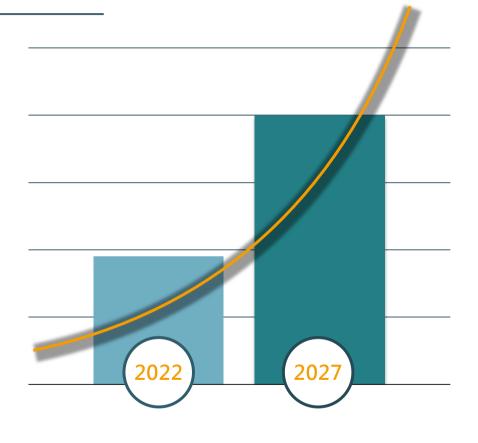








#### **NK Market**



2022 Global market size: 146.7 Million USD<sup>1</sup> 2027 Global market size projection: 321.6 Million USD<sup>1</sup> CAGR (2022-2027) References: 1. https://www.sdki.jp/press-details/neurotrophic-keratitis-market/917#



#### Oxervate

API	rhNGF (nerve growth factor) 118 a.a., 13kDa/ produced in E. coli			
MOA	NGF support corneal integrity by:  1) corneal innervation;  2) tear secretion;  3) cell proliferation and differentiation			
Effective Onset	8 weeks			
Side Effects	eye pain; eye inflammation; corneal deposits; ocular hyperemia; foreign body sensation			
NDA	P1/2 plus P2 trials; 204 patients			
Endpoint	percentage of patients with completed healing			
Storage	-20°C at pharmacy; 4°C up to 14days			
Cost/ year	US\$96,992 (\$1,732/vial x 56 days x 1 cycles/year)			

\*PDSP 29mer is synthesized by SPPS

\*29mer can activate stem cells and has neurotrophic effects

\*29mer has early onset effects (1-2 weeks for DED)

\*29mer is well tolerated with mild irritation during instillation

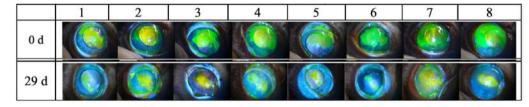
\*29mer in current formulation can be stored at 4°C long term

\*29mer can be priced affordably



# BRM424 promoted complete corneal healing in NK

#### Vehicle



#### BRM424

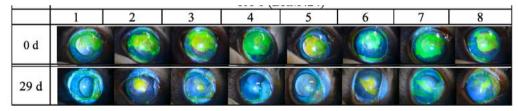
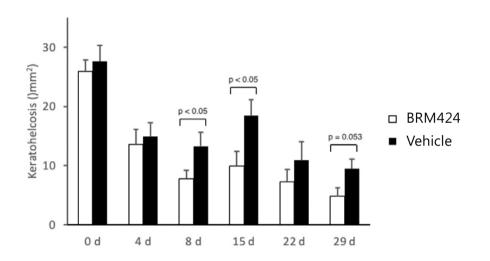


Figure 1. Corneal Ulcer Area versus Day Plot

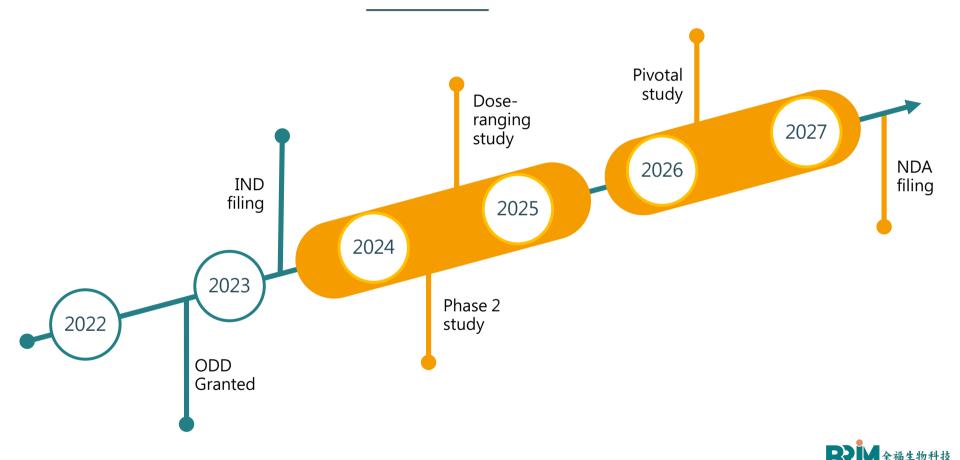


#### Chinchilla Rabbit Neurotrophic Keratitis Model:

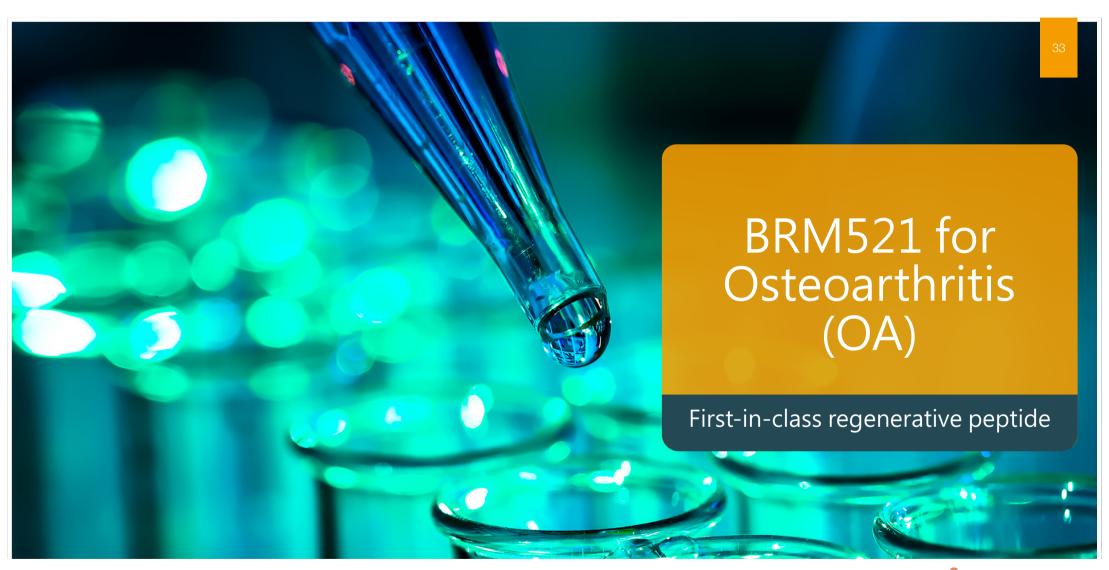
- The **ophthalmic nerve (V1)** of the trigeminal nerve is injured with **sodium hydroxide** (NaOH) unilaterally 5 days prior to treatment.
- Usually, corneal epithelial defects are developed 3-5 days post-surgery, and the corneal ulcer is developed 5-7 days post-surgery.



# BRM424 development timeline

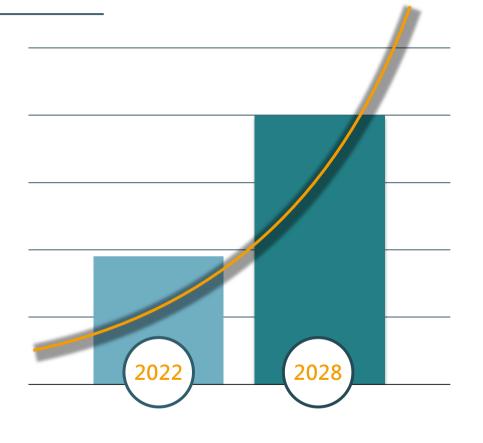








#### **OA Market**

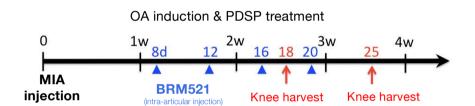


2022 Global market size: 7.3 Billion USD<sup>1</sup> 2028 Global market size projection: ~11.7 Billion USD¹ CAGR (2022-2028)  $8.18\%^{1}$ 

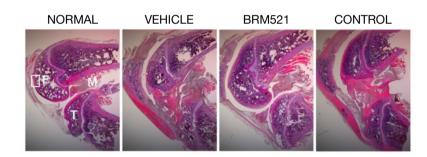
1. https://www.researchandmarkets.com/reports/5769366/osteoarthritis-therapeutics-market-global



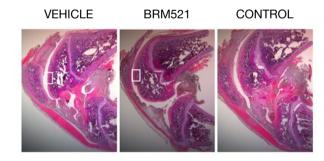
### BRM521 promotes joint cartilage regeneration after MIA injection



Post MIA 18 days



Post MIA 25 days





# Effectively relieves OA pain in MMT model at day 7

#### Measurement:

**Treatment:** IA injection on Week2 post-MMT, weekly for 3 weeks

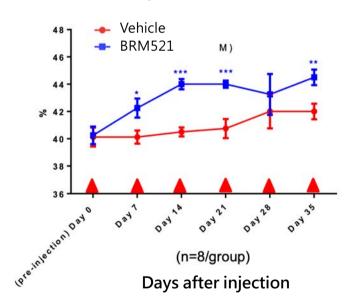
Sacrifice: after 1-week final IA injection

Weight-bearing ratio (%) =

Weight on right (OA) leg

Weight on right + left legs

Weight-bearing ratio (pain level)



BRM521 vs Vehicle: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

Day 0: 7 days after surgery

Error bar: SEM

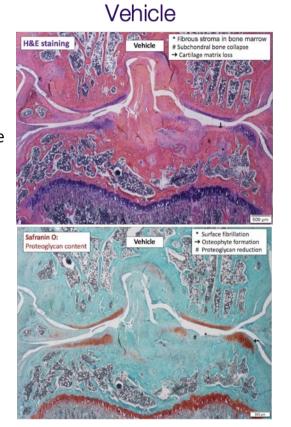


### BRM521 promotes joint cartilage regeneration in the MMT model

#### Fibrous stroma in bone marrow

- Subchondral bone collapse
- Cartilage matrix loss

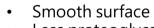
- Surface fibrillation
- Osteophyte formation
- Proteoglycan reduction



#### **BRM521**



- Less proteoglycan reduction (by Safranin O



staining)

Normal cartilage structure

Normal subchondral bone





