



Corporate Presentation

July 2021

Forward-Looking Statements

This presentation contains forward-looking statements regarding Zosano's technology and product candidates, including M207, Zosano's plans for and the anticipated timing with respect to the commencement of the PK study and the availability of data from the study, the expected timing of the resubmission of the M207 NDA to the FDA, the potential benefits and availability of M207 for patients, and other future events and expectations. Readers are urged to consider statements that include the words "may," "will," "would," "could," "should," "might," "believes," "estimates," "projects," "potential," "expects," "plans," "anticipates," "intends," "continues," "forecast," "designed," "goal," "approximately" or the negative of those words or other comparable words to be uncertain and forward-looking. These statements are subject to risks and uncertainties that are difficult to predict, and actual outcomes may differ materially. These include, without limitation, risks and uncertainties associated with the process of discovering, developing and commercializing products that are safe and effective for use as human therapeutics, risks inherent in the effort to build a business around such products and other risks and uncertainties described under the heading "Risk Factors" in the Company's most recent Annual Report on Form 10-K and its periodic reports filed with the Securities and Exchange Commission. Although Zosano believes that the expectations reflected in these forward-looking statements are reasonable, we cannot in any way guarantee that the future results, level of activity, performance or events and circumstances reflected in forward-looking statements will be achieved or occur. All forward-looking statements are based on information currently available to Zosano and Zosano assumes no obligation to update any such forward-looking statements.

Zosano Pharma: Working to Transform How Drugs Are Delivered



**Differentiated
Technology**



**Significant
Clinical
Evidence**



**Versatile
Platform**

OUR MISSION

Advancing Patient Care and Transforming Patient Lives Through Therapies Developed Utilizing Our **Proprietary Delivery Platform**

OUR FOCUS

Late Stage Clinical Development Program for the Acute Treatment of **Migraine** Where Current Therapies Have Significant Limitations

OUR FUTURE

Patch Technology Designed to Allow for Innovative Application of **Proteins, Peptides** and **Vaccines**



Executive Summary and Recent Developments

Transformative Delivery Platform

- Technology (formerly MACROFLUX) Developed at ALZA Corp/J&J
- **26 Patent Families** and **IP Protection**
- **First** and **Only** Microneedle Patch to be Included in an NDA Submission to the FDA

Addressing Significant Unmet Needs in Migraine

- Migraine is Ranked Globally as the **Seventh Most Disabling Disease**¹
- **Migraine** Impacts approximately **37 Million** People in the US²
- M207, if Approved, May Have the Potential to Offer **Fast, Complete** and a **Durability of Effect** to Patients Suffering From Migraine³

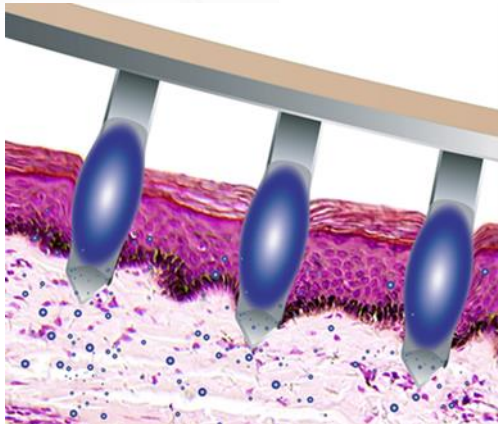
Partnerships

- **Mitsubishi Tanabe Feasibility Study** Agreement in August 2020
- **Two Additional** Feasibility Studies Signed with Undisclosed Partners in Q4 2020
- Actively Seeking **Collaborations** that Utilize our Proprietary Transdermal Microneedle Patch Technology

Key Developments

- Initiated Pharmacokinetic (PK) Study in June 2021 to **Support Resubmission of the M207 NDA**
- **Eversana** Commercialization Partnership – **Commercial Services** Valued at Approximately **\$250MM** Over 5 Years, if M207 is Approved

Zosano's Transdermal Drug Delivery



Novel & Proprietary

Transdermal patch with drug-coated microneedle array



Designed to be Rapid & Consistent

Designed for rapid and consistent absorption of drugs into capillary bed



Designed to Minimize Application Site Sensation

Shallow penetration designed to minimize stimulation of nerve endings



Convenient & Discreet

Quarter size patch with nickel sized array (~2,000 microneedles)



Designed to be Easy to Use

Substantial patient experience in clinical trials

M207 Designed for Optimization of Therapy Delivery



DESIGNED TO ADDRESS UNMET NEEDS IN MIGRAINE



Migraine is Highly Prevalent, Debilitating and Costly

Prevalent¹

- 3rd Most Prevalent Disorder in the World
- Impacts ~**25%** of U.S. Households
- Occurs in **12%** of U.S. Population

Debilitating¹

- **90%** Unable to Function Normally
- **1.2 MM** ER Visits per Year
- **25% of women** experience 4+ Migraines/Month
- Attacks Last **4-72** Hours

Costly

- **\$36B** in Lost Productivity²
- **\$5.4B** in Treatment Costs¹

1. Migraine Research Foundation (2019). Migraine Facts. Retrieved from <https://migraineresearchfoundation.org/about-migraine/migraine-facts>. 2. Bonafede M, Sapra S, Shah N, Tepper S, Cappell K, Desai P. Direct and indirect healthcare resource utilization and costs among migraine patients in the United States [published online February 15, 2018]. Headache. doi: 10.1111/head.13275

Patients Want Fast And Complete Pain Relief That Lasts

74%

of Sufferers



**Reported Inadequate
Treatment Response**

65%

of Sufferers



**Reported Rapid
Headache Onset**

49%

of Sufferers



**Reported Inadequate
2 Hour Pain Freedom**

38%

of Sufferers



**Reported Recurrence
of Headache Within
24 Hours**

Triptans Are and Will Remain the Standard of Care

The **2018** American Headache Society **Position Statement** On Integrating New Migraine Treatments Into Clinical Practice¹.

- **treat early** after the onset of a migraine attack
- choose a **non-oral route** of administration for selected patients
- account for **tolerability** and safety issues

“...and use migraine-specific agents (triptans), for moderate or severe attacks...”

Yet Current Triptan & DHE Formulations Fail to Meet Patient Needs



24% Nausea Affects Treatment²



25% Complain of Bad or Unusual Taste³



82% Discontinuation Rate for Triptan Injectables⁴

DHE⁵



- Formulations not Optimal
- Associated with Severe Cardiac Events
- Pregnancy Category X



1. The American Headache Society Position Statement On Integrating New Migraine Treatments Into Clinical Practice. Headache. 2019 Jan;59(1):1-18. doi: 10.1111/head.13456. Epub 2018 Dec 10. 2. Lipton et al. Unmet Acute Treatment Needs From the 2017 Migraine in America Symptoms and Treatment Study. Headache 2019;59:1310-1323. 3. GlaxoSmithKline. (2013). IMITREX (sumatriptan) Nasal Spray HIGHLIGHTS OF PRESCRIBING INFORMATION. Research Triangle Park, NC: Author. 4. Alam A. et al. Triptan Use and Discontinuation in a Representative Sample of Persons With Migraine: Results From Migraine in America Symptoms and Treatment (MAST) Study. Neurology April 09, 2019; 92 (15 Supplement) P4.10-019. 5. D.H.E. 45® (dihydroergotamine mesylate) Injection, USP Prescribing Information. East Hanover, New Jersey: Author.

M207 Clinical Results From Phase 2/3 ZOTRIP Study



Results

**Observed
Peak Plasma
Concentration**

**23% of Patients
Achieved Pain
Relief**



Efficacy Results

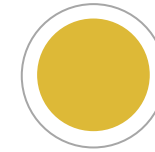
81%

**Reported
Pain Relief
at 2 Hours**



42%

**Reported
Pain
Freedom at
2 Hours**



Activity

78%

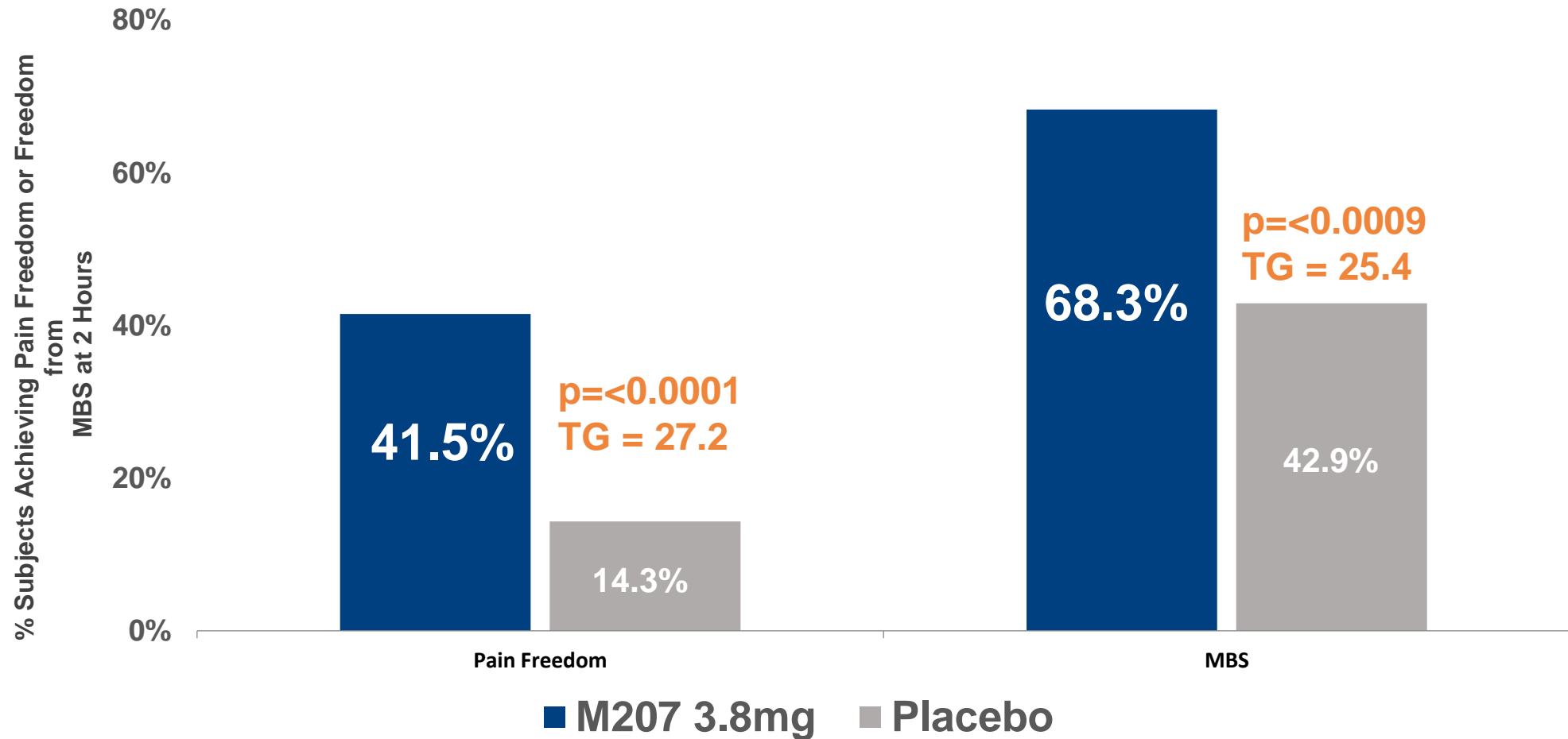
**Reported
Pain Relief
at 24 Hours**

71%

**Reported
Pain Relief
at 48 Hours**

Clinically Significant Results on Pain Freedom and MBS in Phase 2/3 Study

Successful Achievement of Co-Primary Endpoints

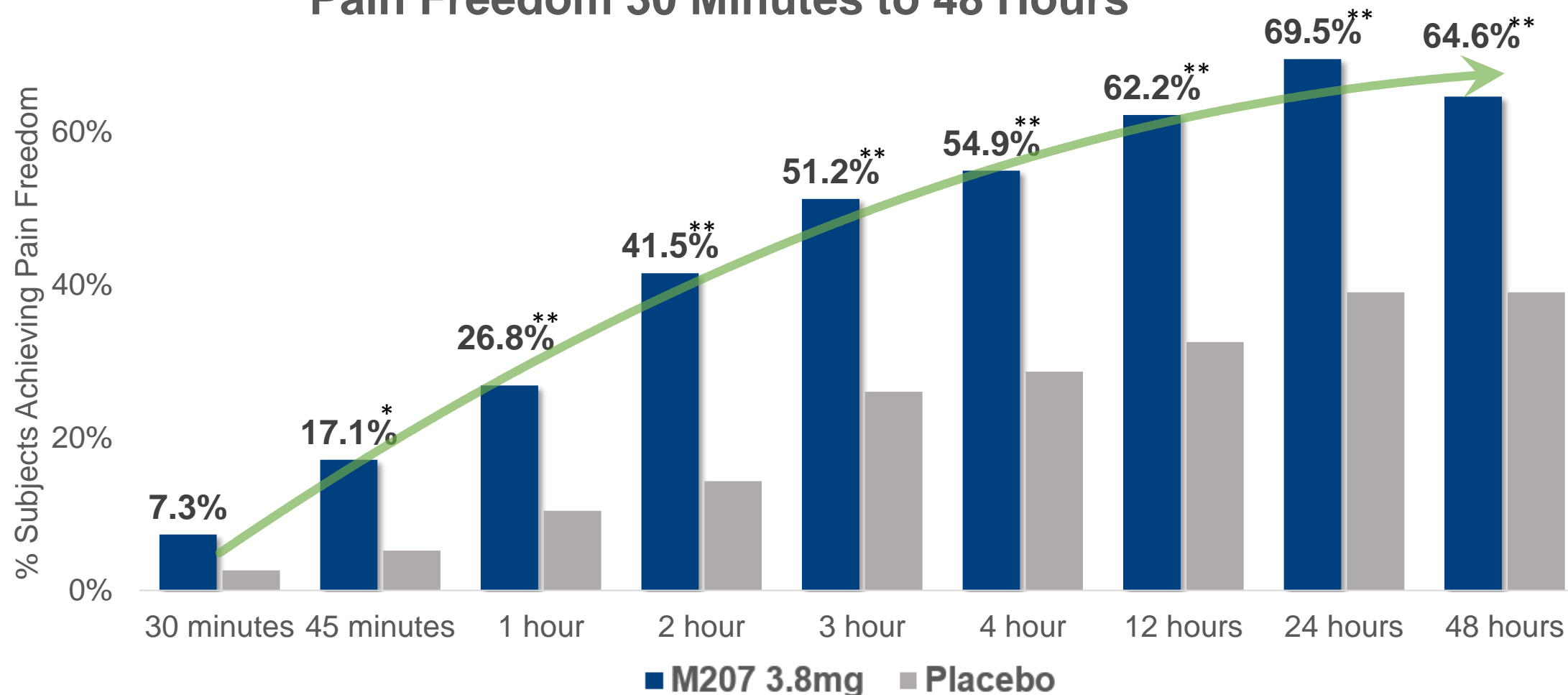


Spierings ELH *et al.* Randomized, double-blind, placebo-controlled, parallel-group, multi-center study of the safety and efficacy of ADAM zolmitriptan for the acute treatment of migraine. *Cephalalgia* 2018 Feb;38(2):215-224.

TG = Therapeutic Gain (difference between M207 and Placebo)

M207 Showed Rapid and Sustained Effect With One Dose

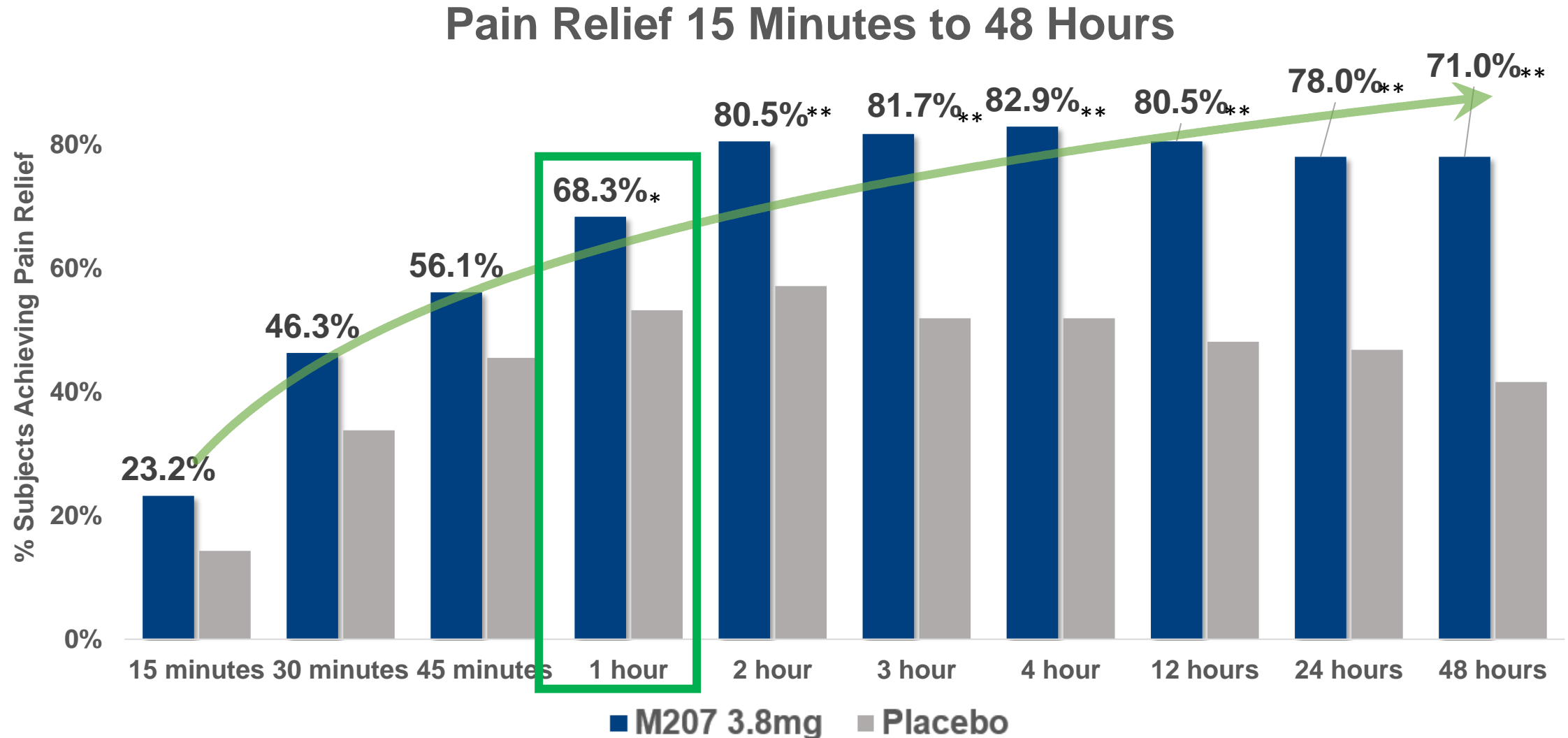
Pain Freedom 30 Minutes to 48 Hours



Spierings ELH *et al.* Randomized, double-blind, placebo-controlled, parallel-group, multi-center study of the safety and efficacy of ADAM zolmitriptan for the acute treatment of migraine. *Cephalalgia* 2018 Feb;38(2):215-224.

*p<0.05 **p=0.01

Early Separation From Placebo Observed Within 15 Minutes and Was Statistically Significant by 1 Hour



Spierings ELH *et al.* Randomized, double-blind, placebo-controlled, parallel-group, multi-center study of the safety and efficacy of ADAM zolmitriptan for the acute treatment of migraine. *Cephalalgia* 2018 Feb;38(2):215-224. *p<0.05 **p=0.01

Positive Results Seen Even in the Most Difficult Migraine Types

Migraine On Awakening

44% Reported
Pain Freedom
at 2 Hours



Migraine With Nausea

44% Reported
Pain Freedom
at 2 Hours



Delayed Treatment ≥ 2 Hours

33% Reported Pain
Freedom at 2
Hours

Migraine With Severe Pain

69% Reported
Pain Relief
at 2 Hours



Long Term Safety Study Showed Consistent Response

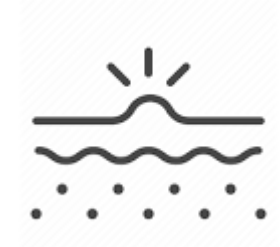
Endpoint	ZOTRIP Pivotal Study (Single Dose)		Open-Label Long-Term
	Placebo (N = 77)	M207 3.8 mg (N = 82)	M207 3.8 mg (N = 5,617 attacks)
Pain Freedom at 2 hours	14%	42%	44%
Pain Relief at 2 hours	57%	81%	81%
Sustained Pain Freedom 2-24 hour	10%	32%	38%
Sustained Pain Freedom 2-48 hour	9%	27%	35%
Sustained Pain Relief 2-24 hour	38%	68%	70%
Sustained Pain Relief 2-48 hour	33%	63%	65%

* For sustained endpoints, data from all timepoints 2-24 (or 48) hours had to be present

Spierings E.L.H., et al. (2020 June 13th). Comparison of a single dose and repeat dose of M207 for pain freedom, pain relief, sustained pain freedom and sustained pain relief for the acute treatment of migraine [Virtual Oral Presentation] American Headache Society 2020 Virtual Annual Scientific Meeting, US. <https://americanheadachesociety.org/events/virtual-annual-scientific-meeting/>

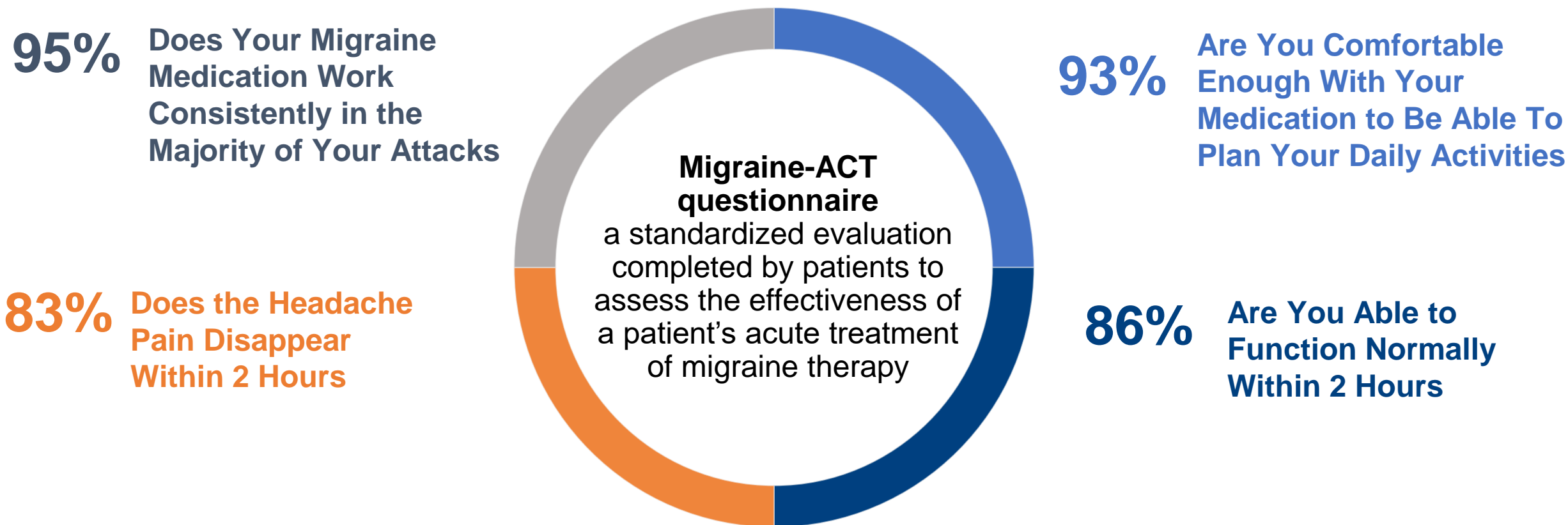
M207 was Well Tolerated in the Long-Term Safety Study

- Most Common Adverse Events were Application Site Redness/Swelling.
 - **95%** were **Mild**
 - **80%** Resolved Within **48 hours**
- Less than **2% of Patients** Reported Neurological Triptan-like Side Effects Such as **Dizziness and Paresthesia**.



Favorable Migraine-ACT Responses From the Long-Term Safety Trial

Proportion of Participants Who Answered “Yes” at 48 Weeks



Nahas S., et al. (2019 Sept. 8th) Long-term Safety of M207™ for the Acute Treatment of Migraine: 1-year Safety Results of Nearly 6,000 Treated Attacks. [Oral Presentation] International Headache Conference, Dublin, IE. <http://www.ihc2019.com/>

COMMERCIAL STRATEGY

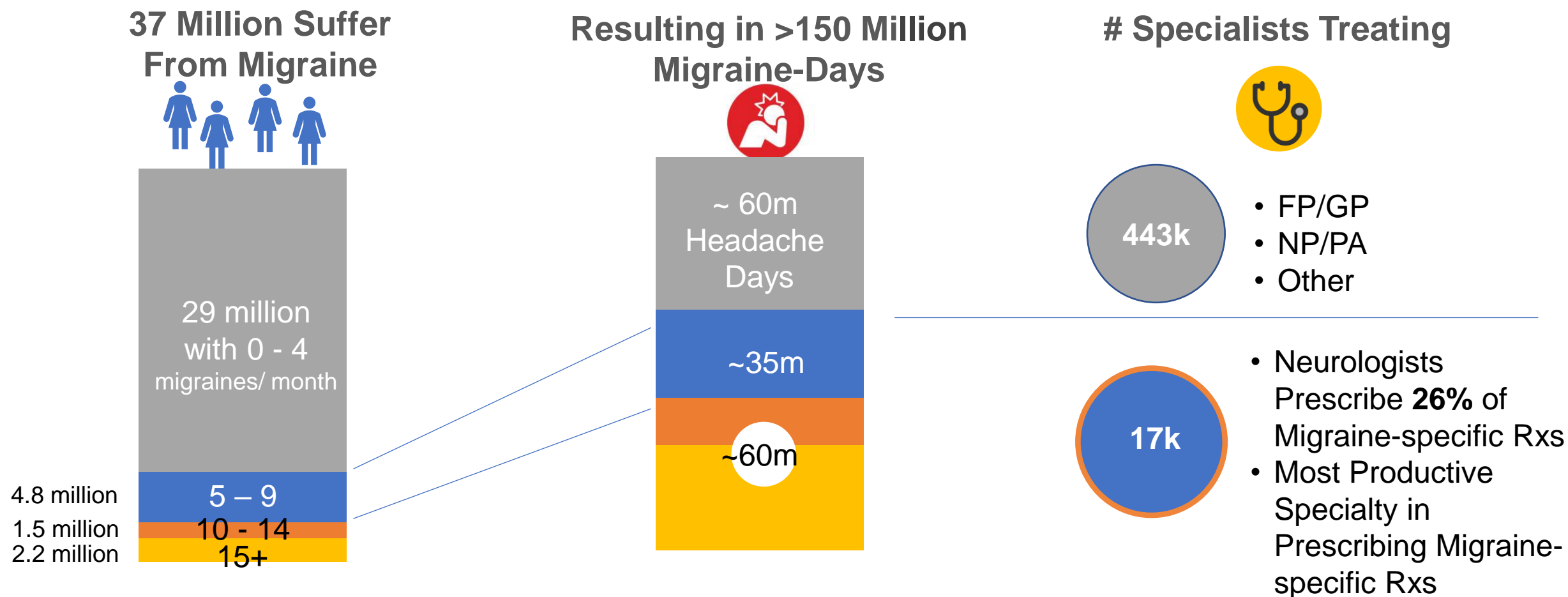


Zosano/EVERSANA Partnership Agreement



- Approximately **\$250MM Expected Commercialization Budget** over 5 Year Term
- Comprehensive Commercialization Services

8MM Migraine Patients Represent a Large, Focused Opportunity



- **~8 MM Patients Account for ~60% of All Monthly Headache Days**

Patients Continue to Suffer Even with New Market Entrants

Neurologists Have a Difficult-To-Treat Population

Migraine Patients
Treated Monthly (Avg.)

300+

67%

Strongly Agree They Have a
Substantial **“Difficult-To-Treat”**
Migraine Patient Population



45%

Of Physicians’
Patients are on
Preventive Therapy
Experiencing ≥ 4
Headaches
Monthly

AND...

51% of These
Patients Have High
Unmet Needs



Physician Market Research: Neurologists Strongly Agree that...

79%

Still an **UNMET NEED** in the **acute setting** even in patients that respond to **preventive therapy**



79%

Patients with **morning migraine** need a therapy with **FAST ONSET** and high success of **PAIN RELIEF**



63%

Using a **NON-ORAL** therapy in the difficult to treat population is ideal since many migraine patients have **nausea and vomiting**



70%

I would offer a **NON-ORAL** triptan that offers **fast** and **complete** pain relief that is **sustained** and **well tolerated**



Physician Market Research: Strong Positive Reaction to M207's Potential Product Profile

Differentiated Potential Product Attributes Key Drivers for HCP Adoption



POTENTIAL IDEAL PATIENT TYPES

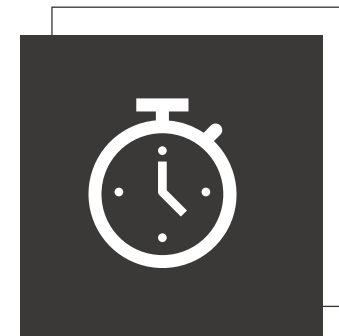
- Experiences **Early Nausea** and/or Early Vomiting Due to Migraine
- Averse to Injections Due to **Fear of Needles**
- Experiences **Rapid Onset** of Migraine
- Averse to Nasal Sprays Due to Bad Taste

OVERALL PERCEPTION OF POTENTIAL PRODUCT PROFILE



Positive Impression of Clinical Data; Comfortable With Molecule and Using New Route of Administration Based on Clinical Data

KEY DRIVERS



- Potential Rapid Onset of Action
- Potential Duration of Response
- Patch Route of Administration
- Safety and Tolerability Data

Survey Data Suggest Product Profile Could Be Well Positioned for Adoption and May Be More Favorable Than New Market Entrants

17% - 24%



Potential Share of Acute Treatments
for Migraine after Product X Launch*

7%- 16%



Ubrogepant

7%- 15%



Rimegepant

7%- 16%



Lasmiditan

ZS Associates May 2020 Market Research: Market shares are in patients with ≥ 5 MHDs per month stated, weighted & undiscounted. Insights drawn from n=19 Neurologists, n=4 NP/PAs, n=11 PCPs, and n=5 KOLs

Payer Feedback on Market Access for Product X, if Approved



Top Line National, Regional Payer and PBM Findings

- Recognition that Migraine Patients May **Need Non-oral Treatment Options**
- **Speed of Onset** and **Sustained Response** Noted as Positives
- Likely Formulary Placement Will be **Tier 3** or Non-preferred After **Failure of Two Generic Triptans**
- Formulary Placement is **Comparable** to Current **Branded Triptans**
- **Price Expectations** in the Range of the **Branded Triptans**
- Payer Access is **Not Expected** to be a Barrier



Strong Market Opportunity with a Compelling Value Proposition



Development of M207

- **June:** 1st Subject Enrolled In Pivotal Study
- **November:** Completion of Enrollment
- **October:** Publication of Pivotal Data in Cephalalgia
- **November:** Initiation of 1 Year LTSS
- **February:** Completion of LTSS
- **October:** Initiation of Phase 2/3 Study in Cluster;
- **December:** M207 NDA Submission
- **August:** Commercialization Agreement with EVERSANA
- **October:** CRL from FDA
- **December:** Ended Enrollment in Phase 2/3 Cluster Study
- **January:** Completed Type A Meeting with FDA to Discuss Requirements for Resubmission
- **February:** Received Official Type A Meeting Minutes/Submitted Proposed PK Study Protocol to FDA for Review
- **June 2021:** Initiated PK Study
- **EXPECTED DEVELOPMENT**
- **Q4 2021:** Subject to a Positive PK Study, Resubmission of NDA to FDA

2016

2017

2019

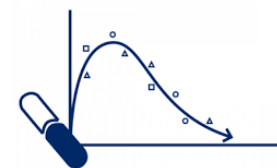
2020

2021

2021

M207 Regulatory Update – NDA Regulatory Update

- **June 2021 - Initiated a Pharmacokinetic (PK) Study to Support Resubmission of the M207 NDA.**
 - **The PK Study Incorporates FDA Feedback from its Review of the PK Study Protocol and includes:**
 - A Randomized Open-label Three-way Crossover Study to Compare the Pharmacokinetics, Safety, and Tolerability of Two Lots of M207 and Intranasal Zolmitriptan in 48 Healthy Volunteers
 - The FDA Recommended Skin Assessment on Patients to Generate Additional Safety Information
- **February 19, 2021 - Received Official Type A Meeting Minutes from FDA**
- **January 29, 2021 - Held Type A meeting with the FDA**
- **October 20, 2020 - Received Complete Response Letter from FDA**



PIPELINE EXPANSION



Leveraging Platform & Clinical Validation for Pipeline Expansion

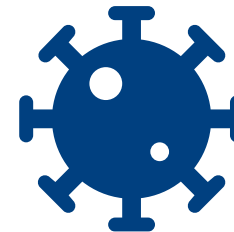
PRE-CLINICAL & CLINICAL PROOF-OF-CONCEPT STUDIES

- **Initiated Three Collaborations in 2020**
 - **Mitsubishi Tanabe**
 - Assessing feasibility for undisclosed molecule
 - **Two Undisclosed Partners**
 - Assessing feasibility for undisclosed molecules
- **Small Molecules**
 - Zolmitriptan (NDA submitted)
- **Hormones, Peptides & Proteins**
 - Clinical: Glucagon (Phase 2), PTH (Phase 2), Desmopressin (Phase 1)
 - Preclinical: EPO, HGH
- **Prophylactic Vaccines**
 - Undisclosed Compound (Phase 1)

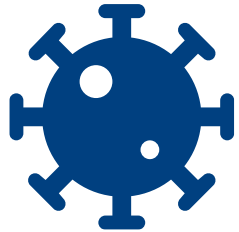


FUTURE : POTENTIAL PROGRAMS

- **Cancer Vaccines**
- **COVID 19 Vaccine**
- **Immuno-modulation / Immuno-therapy**
- **Local / Systemic Delivery Applications**
- **Novel Compounds**



Partnering Opportunity for Development of Microneedle COVID-19 Vaccine



- Ongoing Discussions with Potential COVID-19 **Vaccine Co-developers**
- Pursuing **Non-dilutive Funding Opportunities** for COVID -19 Programs Through **Governmental Agencies**



Zosano Intends to Utilize Microneedle Technology to Develop a Single Step, Single Packaged Product Candidate Designed to Support Widespread Deployment of a COVID 19 Vaccine



STABLE: Formulations Designed to be **Stable at Room Temperature** Potentially Enabling Distribution Using **Mail Distribution** Systems



SAFE FOR HANDLING: Patch is Designed to **Prevent the User From Inadvertently Touching** the Microneedles and Potentially Removing Some of the Vaccine



POTENTIALLY FAVORABLE DELIVERY METHOD: Coated Microneedles That Deliver Directly to Epidermal/dermal Skin Layers Which May Lead to an **Improved Response** and Potential for **Dose Sparing Therapies**



PROOF OF CONCEPT: Phase 1 Clinical Data for Influenza Vaccine Showed That the **Microneedle Coated Tri-valent Flu Vaccine** was Comparable in Immune Response to the **Commercial IM Injection**



EASY DISPOSAL: Once Applied the User Would Dispose of the Unit in **Standard Trash Receptacles**



EXTENSIVE CLINICAL EVALUATIONS: Over **40,000 patch applications** With No Incidences of Infection

Zosano Pharma Microneedle Array Drug Delivery System

Ideal solution for delivery of peptides, proteins and hydrophilic drugs

- First generation transdermal patches limited to hydrophobic molecules
- Low bioburden manufacturing and terminal sterilization mitigates need for aseptic manufacturing
- Room temperature stable and no reconstitution required: eliminates need for cold supply chain
- Simple reusable applicator with unit-dose patch enables single-step drug delivery
- Accessible and discreet site of application
- Rapid drug delivery bypasses GI tract eliminating first-pass metabolism
- Short patch wear time (30 min)
- Band-Aid[®]-like ease of patch removal and convenient disposal

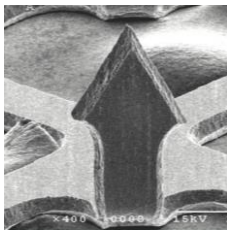
Dosage Flexibility Enabled by Formulation, Process and Design

Formulation & Coating

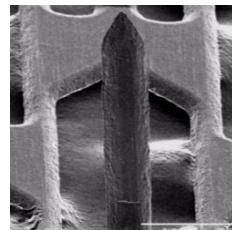
1. **Formulation:** Product formulation defines capability of coating on the microneedle substrate. Kept constant within a product family
2. **Process:** Multiple dips increase coated amount per microneedle - once passes (& coating morphology) are set, process is kept constant within a product family
3. **Individual Microneedle design:** Length, width, and features can be used to tune coated area – kept constant within a product family

Microneedle-array / Patch

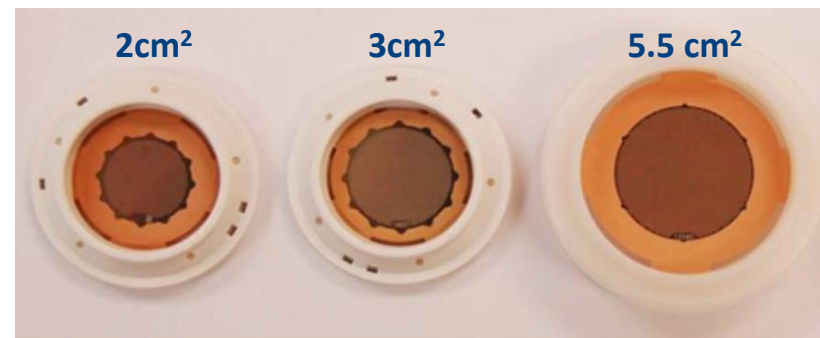
4. **Design of Array (Density):** Density of microneedles can be optimized for the drug – kept constant across dosages within a product family
5. **Design of Array (Size):** Large patch templates can be produced to vary dosages across a product family - linear absorption demonstrated with 2cm², 3cm² & 5 cm² in clinical studies



Low Dose
160 ug/3cm²



Higher Dose
Up to 2 mg/3 cm²



CORPORATE OVERVIEW



2021 Milestones / Anticipated Milestones

Complete Type A Meeting with FDA	Q1	✓
Receive FDA Feedback on PK Study Protocol	Q2	✓
Sign Agreement with CRO	Q2	✓
Initiate Pharmacokinetic Study	Q2	✓
Complete Pharmacokinetic Study	Q3	
Resubmit NDA for M207	Q4	

Select Financials (unaudited)

- Cash and cash equivalents as of March 31, 2021: \$26.9m
- Total shares outstanding as of May 7, 2021: 106.7m
- Select financial information for the quarter ended March 31, 2021, as compared to the quarter ended March 31, 2020

	March 31, 2021	March 31, 2020
	(in millions, except per share data)	
Research & development expenses	\$5.3	\$5.5
General & administrative expenses	\$2.8	\$3.1
Net loss	\$(8.1)	\$(8.7)
Net loss per share – basic and dilutive	\$(0.08)	\$(0.24)
Weighted-average shares	104.4	36.3

Experienced Management Team

Name	Title	Experience		
Steven Lo	Chief Executive Officer			
Christine Matthews	Chief Financial Officer			
Hayley Lewis	Senior VP, Operations			
Don Kellerman	VP, Clinical Development & Medical Affairs			

Board of Directors

Name	Title	Experience
John P. Walker	Chairman, Zosano Pharma	  
Steven Elms	Managing Partner, Aisling Capital	  
Linda Grais, MD, JD	Director, Zosano Pharma	  
Kenneth R. Greathouse	Director, Zosano Pharma	  
Joseph Hagan	President and Chief Executive Officer, Regulus Therapeutics Inc.	  
Steven Lo	President and Chief Executive Officer, Zosano Pharma	  
Kathy McGee	Chief Operating Officer, AVITA Medical	  
Kleanthis G. Xanthopoulos, PhD	President and Chief Executive Officer, IRRAS AB	  

