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Satsuma Pharmaceuticals, Inc.

Company Presentation

NASDAQ: STSA

May 11, 2021

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Disclaimer

Important Notice

This Presentation contains forward-looking statements concerning the business, operations and financial performance and condition of Satsuma Pharmaceuticals, Inc. (the "Company"), as well as the Company's plans, objectives and expectations for its business operations and financial performance and condition. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "aim," "anticipate," "assume," "believe," "contemplate," "continue," "could," "due," "estimate," "expect," "goal," "intend," "may," "objective," "plan," "predict," "potential," "positioned," "seek," "should," "target," "will," "would," and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include, but are not limited to, statements about the potential continued development of STS101; the Company's expectations regarding the completion of its analysis of the EMERGE trial data and announcement of its updated business plans by early 2021; Company's expectations regarding the potential safety and efficacy of STS101; the Company's clinical and regulatory development plans; the Company's expectations with regard to the ASCEND trial; the Company's expectations regarding the potential market size and size of the potential patient populations for STS101, if approved for commercial use; the Company's commercialization, marketing and manufacturing plans and expectations; the pricing and reimbursement of STS101, if approved; the implementation of the Company's business model and strategic plans for its business and STS101; the scope of protection the Company is able to establish and maintain for intellectual property rights covering STS101, including the projected terms of patent protection; estimates of the Company's expenses, future revenue, capital requirements, its need for additional financing and its ability to obtain additional capital; the Company's future financial performance; and developments and projections relating to the Company's competitors and the Company's industry, including competing therapies and procedures. In light of these risks and uncertainties, the events or circumstances referred to in the forward-looking statements may not occur. The Company's actual results could differ materially from those stated or implied in forward-looking statements due to a number of factors, including but not limited to, risks detailed in the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2021, filed with the Securities and Exchange Commission, as well as other documents that may be filed by the Company from time to time. In particular, the following factors, among others, could cause results to differ materially from those expressed or implied by such forward-looking statements: the accuracy of the Company's estimates relating to its ability to initiate and/or complete clinical trials; the Company's ability to demonstrate sufficient evidence of efficacy and safety in its clinical trials of STS101; the Company's ability to select suitable dosing regimens; the results of preclinical and clinical studies may not be predictive of future results; the unpredictability of the regulatory process; regulatory developments in the United States and foreign countries; the costs of clinical trials may exceed expectations; the Company's ability to raise additional capital; and the risk that costs of clinical trials and preclinical activities will exceed expectations. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee that the events and circumstances reflected in the forward-looking statements will be achieved or occur, and the timing of events and circumstances and actual results could differ materially from those projected in the forward-looking statements. Accordingly, you should not place undue reliance on these forward-looking statements. All such statements speak only as of the date made, and the Company undertakes no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

This Presentation discusses STS101, a product candidate that is under clinical study, and which has not yet been approved for marketing by the U.S. Food and Drug Administration. No representation is made as to the safety or effectiveness of STS101 for the therapeutic use for which STS101 is being studied.

Summary

Developing innovative and differentiated treatment	Large and growing market with high unmet needs	Updated development plan	Well-capitalized to achieve key milestones
STS101 (DHE nasal powder)	Acute treatment of migraine	New Ph3 efficacy trial to begin mid-2021	$80M private placement announced 3/1/21
• DHE's anti-migraine effects are differentiated and well-established • However, administration and/or performance of available dosage forms have limited DHE use	• Up to 40M patients in U.S. alone • Acute market is seeing accelerating growth	• Key issues from EMERGE Ph3 efficacy trial identified and to be addressed in new Ph3 trial	• **3/31/21 cash: $133.1M** • **Current cash and financing proceeds fund operations into 2H 2023 and through key milestones:** - Readout of new STS101 Ph3 efficacy trial in 2H 2022 - Completion of STS101 ASCEND long-term safety trial in 2H 2022 - Filing of NDA Q4 2022

STS101

- **Proprietary, advanced formulation and delivery device technologies**
- **Broad and long-lived IP estate, with 10 issued U.S. patents with expiration dates as late as end of 2039**

- **Team with strong track record of execution**
- **Significant value creation opportunity**

Acute treatment of migraine is a large and growing market with significant unmet needs

HIGH PREVALENCE	▪ Up to **40M** people in the U.S. and > **100M** in Europe ▪ **> 1 billion** globally ▪ Most prevalent among **adults ages 18-44;** affects **women over men 3:1**
LEADING CAUSE OF DISABILITY	▪ **Second leading cause of disability worldwide** in terms of number of years lost to disability ▪ 3rd most burdensome neurological disorder in the U.S. (after stroke & Alzheimer's/dementias); **responsible for burden of 2.4M disability-adjusted life-years in 2017**
HIGH DIRECT & INDIRECT COSTS	▪ **$36 billion annually** in estimated **healthcare and lost productivity costs in the U.S.** ▪ **Up to 157M estimated lost workdays annually in the U.S.**
ACUTE TREATMENT MARKET IS LARGE, GROWING & UNDERSERVED	▪ **17M Rx's** for migraine-specific acute treatments in the U.S. in 2020, representing **9% YoY growth** ▪ Strong initial uptake of oral gepants, ~10% share of acute Rx market, validates need for new treatments and high unmet needs ▪ Gepant net sales currently annualizing at >$750M/year and predicted to be multi-billion product class ▪ Up to **40%** of patients **do not get adequate responses** from their initial acute treatment Rx

Sources: Migraine Research Foundation, IQVIA; Cameron, Headache 2015; Ferrari, Cephalalgia 2002; Färkkilä, Cephalalgia 2002; Lipton, Headache 2017; IQVIA Rx data; Feigin et al., JAMA Neurology 2020

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DHE treatment has high potential to achieve treatment goals and address patient needs—if limitations of available dosage forms could be overcome

Greatest efficacy

EFFICACY

DHE: GOLD STANDARD

DHE use significantly limited by disadvantages of available forms

- IV/IM limits patients' ability to self-administer
- Nasal liquid sprays are difficult to administer and poorly effective at consistently achieving blood levels sufficient for efficacy

TRIPTANS: MOST UTILIZED

Triptans are effective for many, easy to administer, and inexpensive

- Significant limitations
- Not sufficiently effective nor well tolerated by many patients

GEPANTS LAUNCHED 2020

Gepants

- Modest efficacy
- Favorable tolerability profile

LASMIDITAN LAUNCHED 2020

Lasmiditan

- Modest efficacy
- Controlled substance; CNS effects and driving limitations

Least efficacy

Sources: Ferrari MD. Cephalalgia 2002; Messali AJ. Headache 2014; Lipton RB. Headache 2017; Silberstein S. Headache 2003; Baron EP. Headache 2010; Moreno Ajona D. Curr Opin Neurol 2020; Tfelt-Hansen P. Headache 2018; Oswald JC. J Pain Res 2018; Messali, Headache 2014

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DHE demonstrated to address many shortcomings of triptan therapy

- **Early treatment required for efficacy**
- **Poorly effective in difficult-to-treat migraines** (e.g., Rapid onset; allodynia, long-lasting, upon-awakening, menstrual)
- **Recurrence within 24 hours**
- **Up to 80% don't achieve sustained pain freedom**
- **Tolerability**
- **Risk of medication overuse headache** (MOH)

LOW TREATMENT PERSISTENCE:

up to 66% of patients don't refill their initial triptan prescription

Sources: Winner P. Arch Neurology1996; Lipton RB. Headache 2001; Ferrari MD. Cephalalgia 2002; Lipton RB. Headache 2017; Lipton RB. Neurology 2007; Cady R. Cephalalgia, 2007; Messali AJ. Headache 2014

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OUR SOLUTION: STS101 (DHE nasal powder)

Proprietary nasal delivery device & dry-powder formulation technologies

Drug-device combination

- Differentiated and injectable-like PK
- Quick and intuitive administration
- Anti-migraine effects and favorable safety and tolerability observed to date in our clinical trials

Single-use nasal delivery device

- Convenient and patient-friendly; no assembly or priming required
- Enables administration of a full-dose within seconds
- Pocket-sized, smaller than available DHE nasal spray devices; discreet and disposable
- Straightforward manufacturing

+

Mucoadhesive nasal powder formulation

- Incorporates drug carrier and engineered drug particle technologies that facilitate rapid drug absorption and favorable PK
- Established manufacturing processes using standard, commonly-used technologies reproduced on commercial-scale equipment

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STS101 designed for intuitive administration – a full dose within seconds

1

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2

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3

SQUEEZE
TO DELIVER
(REPEAT 3X)

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STS101 clinical trial program to date and rationale

Phase 1 PK trial (n=42)

- STS101 rapidly achieved and sustained target plasma concentrations
- Favorable safety & tolerability

Establish PK "bridge" to approved DHE product(s)

EMERGE Phase 3 efficacy trial (n=1,201)

- Single migraine attack treated with STS101 3.9 mg, STS101 5.2 mg or placebo
- Narrowly missed achieving statistical significance on co-primary endpoints (2 hrs post-administration)
- Favorable safety & tolerability

Support differentiating efficacy claims

ASCEND Phase 3 open-label, long-term safety trial with STS101 5.2 mg (ongoing)

- ≥150 subjects treat ≥2 migraines/month PRN for 6 months; ≥50 subjects for 12 months;
- > 275 subjects enrolled*
- Favorable safety & tolerability*
- Anti-migraine activity*

Establish nasal safety of STS101 formulation

Secure approval

<u>and</u>

Position STS101 for commercial success

* Preliminary results as of February 2021

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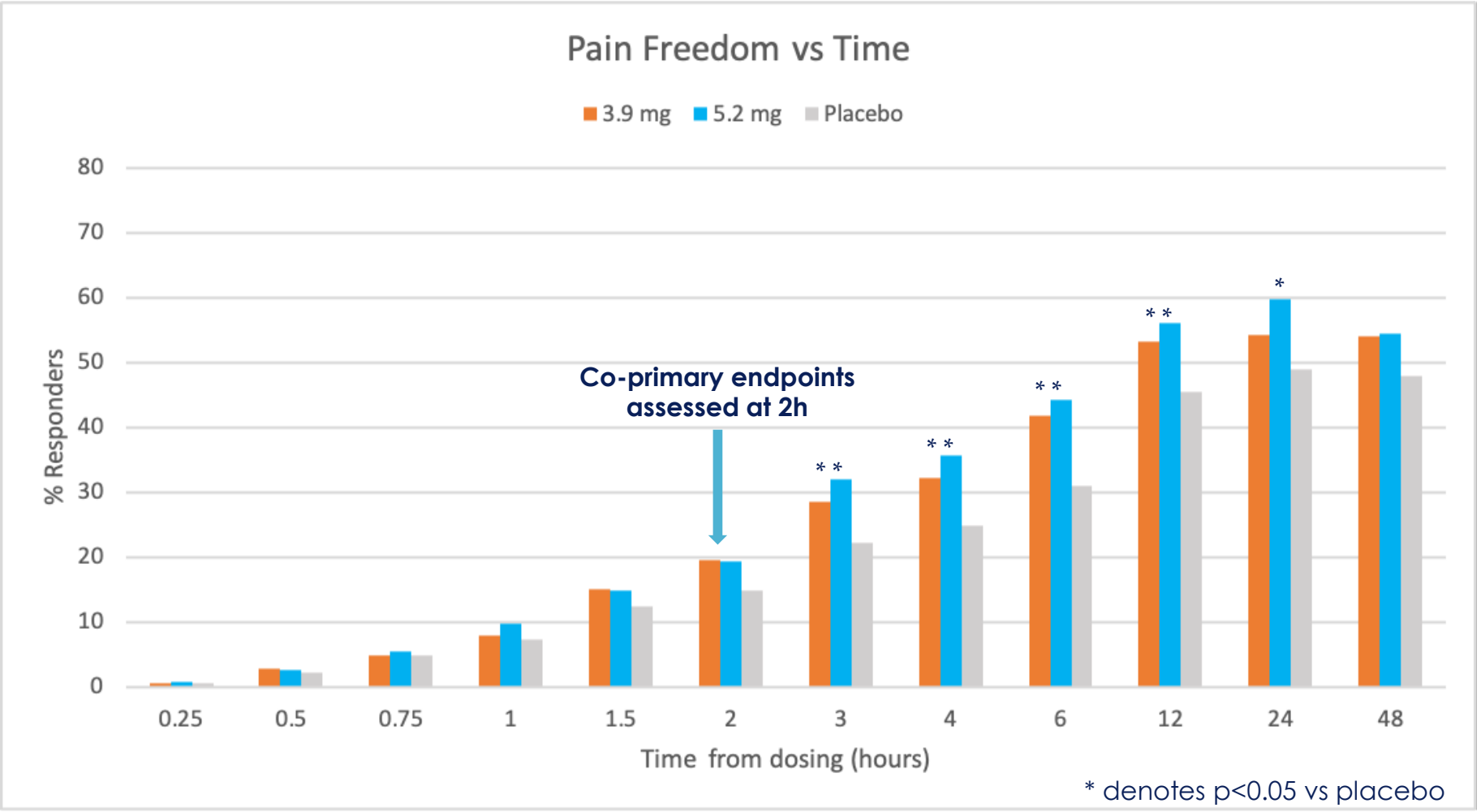
emerge STUDY

Freedom from Pain over time



STS101 5.2 mg was numerically superior to Placebo at all time points and to STS101 3.9 mg at 9 of 12 time points

Difference vs Placebo was significant at 3 hours ($p<0.05$) and all time points thereafter through 24 hours

LOCF analysis*

STS101 difference vs Placebo significant ($p<0.05$) for both dose strengths at 48 hrs when values for subjects with missing data at 48 hrs are imputed based on LOCF

STS101-002 Topline Data September 2020; mITT Population
Subjects with missing data at a time point imputed as nonresponders
* LOCF = last observation carried forward (results based on LOCF imputation for missing data not shown)

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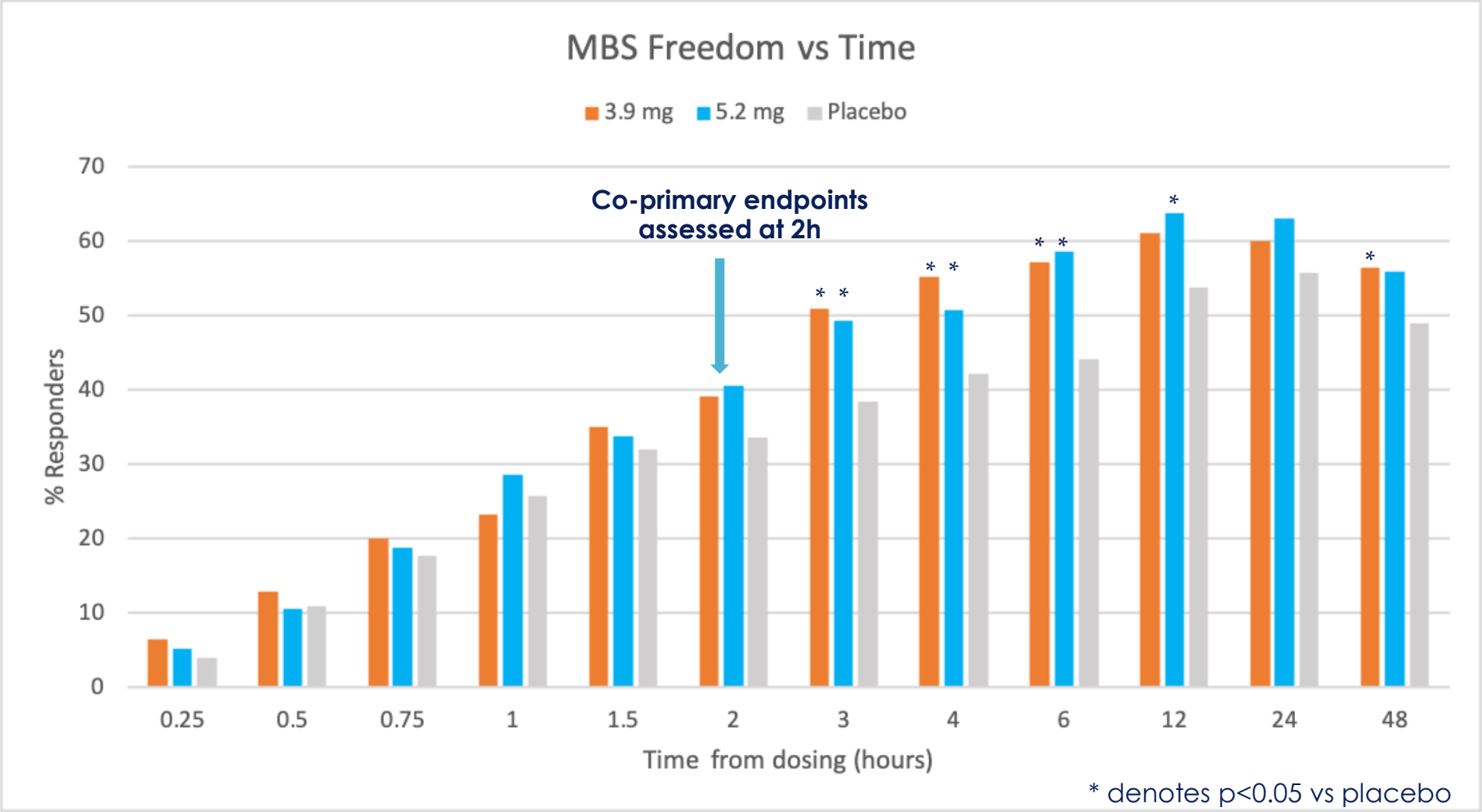
Freedom from Most Bothersome Symptom over time



STS101 5.2 mg was significant (p<0.05) versus placebo from 3 to 12 hours

LOCF analysis*

STS101 5.2 mg difference vs Placebo significant (p<0.05) for all time points from 2 to 48 hrs when values for subjects with missing data are imputed based on LOCF

STS101-002 Topline Data September 2020; mITT Population
Subjects with missing data at a time point imputed as nonresponders
* LOCF = last observation carried forward (results based on LOCF imputation for missing data not shown)

EMERGE trial summary

- High proportions of subjects and treated attacks with characteristics associated with poor treatment outcomes
- Both STS101 dose strengths demonstrated anti-migraine activity, but narrowly missed achieving statistical significance on co-primary endpoints* at 2 hours
  - Statistically significant effect by 3 hours and thereafter
  - Significant effect ($p<0.05$) on multiple secondary efficacy endpoints
- Favorable safety and tolerability profile, with low adverse event rate

We have identified key reasons for negative trial outcome

* Freedom from Pain and Most Bothersome Symptom (from among photophobia, phonophobia and nausea)

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Reasons for negative EMERGE trial outcome and how we are addressing them in our next Ph3 trial

1. STS101 under-delivery

- ✓ Improve subject training and instructions for use
- ✓ Improve STS101 delivery device with minor changes

2. Early eDiary data entry

- ✓ Adjust eDiary data entry to align with nominal time points

3. High proportions of severe/difficult-to-treat attacks

- ✓ Instruct subjects to treat qualifying migraines as soon as pain intensity reaches "moderate"
- ✓ Adjust screening procedures / inclusion criteria

4. High placebo response rate given severity of treated attacks

- ✓ Increase trial size and statistical power
- ✓ Placebo Response Reduction training of sites and subjects
- ✓ 2-arm study will reduce expectation of receiving active vs EMERGE (3-arms: 2 active + placebo)

In addition, we are exploring potential opportunity to maximize efficacy in our next Ph3 trial

- Given STS101 safety and tolerability profile observed to date, a dose strength > 5.2 mg may be feasible
- We are conducting a Ph1 PK study to evaluate STS101 5.2 mg and two higher dose strengths
- Dose strength for new Ph3 trial to be informed by Ph1 results

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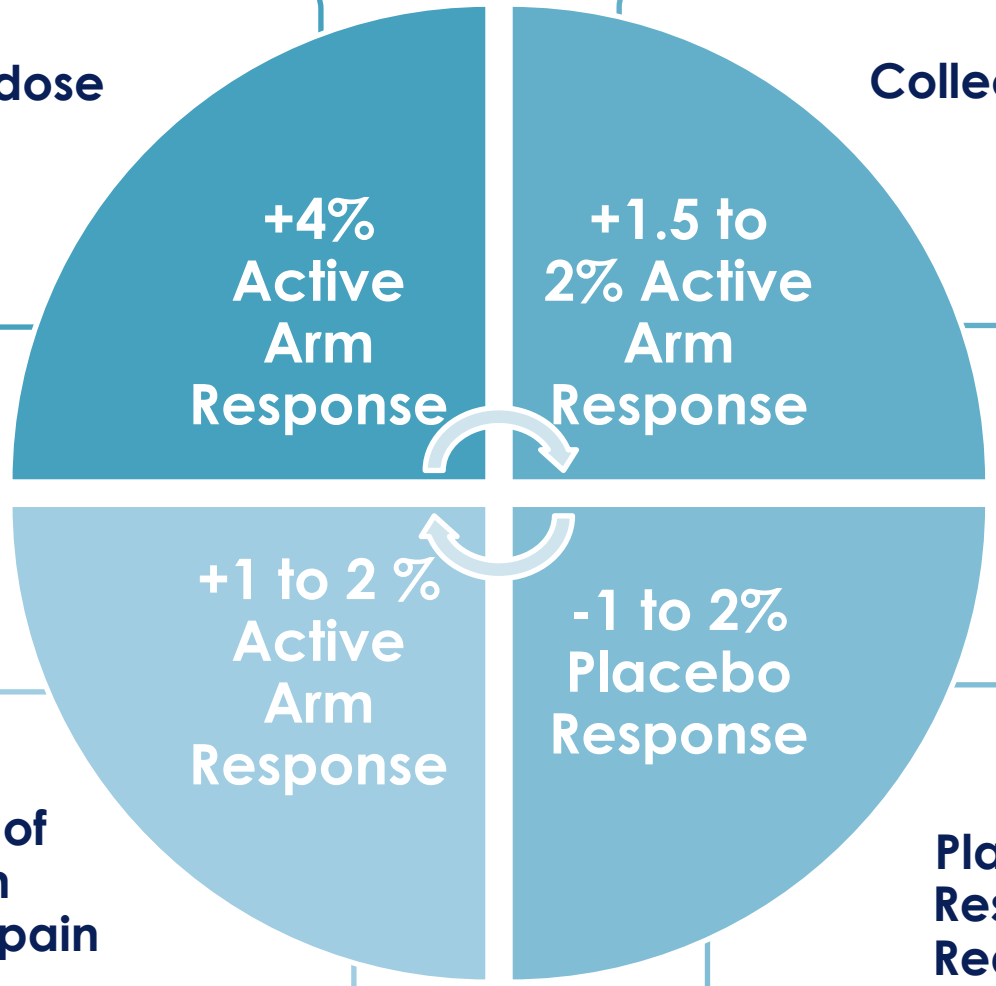
Potential impact of changes on pain freedom at 2hrs in our next Ph3 trial

Deliver full dose

Collect data at 2-hr time point



Increase % of attacks with MODERATE pain intensity

Placebo Response Reduction Training

Estimated Response Rates	
STS101	**Placebo**
23-28%	12-15%

In addition, larger sample size of ~700/arm increases power to detect effect with statistical significance

Values are hypothetical, based on our internal modeling and may not predict clinical trial results

Next steps

	Anticipated STS101 development milestones
Q2 2021	Complete Phase 1 safety and pharmacokinetic study with STS101 5.2 mg and two higher dose strengths; select dose strength for Phase 3
Mid-2021	Initiate new STS101 Phase 3 efficacy trial
2H 2022	Read out topline results from new Phase 3 efficacy trial
2H 2022	Complete ASCEND STS101 long-term safety trial
Q4 2022	File STS101 NDA

Current cash and proceeds from $80M private placement financing announced 3/1/2021 fund operations into 2H 2023 and through key milestones

Financial

- Cash, cash equivalents and marketable securities as of 3/31/2021: $133.1M
- $80M private placement of common stock announced 3/1/21
  - Financing led by Commodore Capital and New Enterprise Associates, with participation from existing shareholders and new investors
- Total shares outstanding as of May 6, 2021: 31.5M
- Current cash and proceeds from private placement fund operations into 2H 2023 and through key milestones

Financial results	Q1 2021
R&D	$7.2M
G&A	3.3M
Net loss	$(10.5M)
Accumulated deficit at 3/31/2021	$(101.0M)

Significant long-term barriers to competitive entry / generics

Broad IP estate reflects innovative nature of STS101 and our drug delivery technology

More than sixty issued and pending U.S. and foreign patents covering formulations, dosages, devices, and methods of treatment

- **United States**: Ten issued U.S. patents with estimated last expiration in December 2039
- **Ex-U.S.**: Ten issued patents, and we expect issued and pending STS101 patents to have similar lives as in the U.S.

Additional competitive barriers

Know-how and trade secrets related to the STS101 formulation, delivery device, and manufacturing processes

- Nasal delivery technology incorporated in STS101 was developed over >15 years
- STS101 DHE nasal powder formulation underwent extensive development and optimization involving PK testing in ~80 non-human primate studies
- Historically, drug-device combinations are challenging to genericize (e.g., Advair)

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